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The American Statistical Association is the world's largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy. Our members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

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Anja Zgodic initially appreciated the ASA for its networking opportunities, but has also now become a passionate member of the Committee on Statistics and Disability. **Page 7**

columns

- 18 **STATtr@k**
Using Sports Analytics, Storytelling with Data to Inspire Interest in Statistics

STATtr@k is a column in *Amstat News* and a website geared toward people who are in a statistics program, recently graduated from a statistics program, or recently entered the job world. To read more articles like this one, visit the website at <http://stattrak.amstat.org>. If you have suggestions for future articles, or would like to submit an article, please email Megan Murphy, *Amstat News* managing editor, at megan@amstat.org.

- 20 **STATS4GOOD**
Count on Stats: Serving the Wider Community with Data for Good

This column is written for those interested in learning about the world of Data for Good, where statistical analysis is dedicated to good causes that benefit our lives, our communities, and our world. If you would like to know more or have ideas for articles, contact David Corliss at davidjcorliss@peace-work.org.



WSDS 2022 Student Travel Awards

Awards are available to help students and early-career professionals attend the Women in Statistics and Data Science Conference. To be eligible, applicants must be either a student enrolled in a terminal degree program (bachelor's, master's, or doctoral) in biostatistics, statistics, or data science or have completed a master's or doctoral degree program in biostatistics, statistics, or data science within the last five years (2017–2022).

Applications must be received by 5:00 p.m. ET on August 22.

Submit an application at <https://bit.ly/3z7Hduw>.

CORRECTION



In the June issue, we incorrectly named Elizabeth Halloran as Michael Hudgens's adviser. Instead, Ira Longini and Glen Satten were Hudgens's co-advisors. We apologize for the error.

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The 2022 Symposium on Data Science & Statistics was held in person in Pittsburgh, Pennsylvania. **Page 24**

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ASA President's Learning Curve

We offer you an active, engaged community of members just like you, so please get involved." I wrote this sentence in my welcome to new members. As a longtime member of the ASA, I knew it was true, but now more than half-way through my presidential year, I have a renewed appreciation for all our association has to offer. This may be surprising, but I have learned a lot about the ASA, and I want to share what I've learned.

The diversity of our profession is perhaps best represented by the 30+ ASA sections and interest groups. As a member of multiple sections, I've benefited from the opportunity to interact with ASA members who share my scientific interests. What I didn't fully appreciate was the breadth of section activities. Sections organize sessions and continuing education courses at JSM and sponsor conferences, webinars, and awards. Becoming active in a section will help you find community.

Whether you are the only statistician or data scientist in your workplace or a member of a large team, you will benefit from becoming active in a section. Take advantage of the member benefit to add a new section to your membership at <https://bit.ly/3PctOqA>.

The Houston Chapter is an important part of my professional community, so I've personally appreciated the role of chapters. In 2021, the Houston Chapter organized a half-day workshop and invited me to speak. The workshop brought forward exceptional science, but it also provided an opportunity to connect with new members in the Houston area and reconnect with longtime friends.

As ASA president, I've read *Chapter Chatter* through a different lens and have come to appreciate the many ways in which we affect our local communities. Events highlighted in the summer 2022 issue of *Chapter Chatter* exemplify the diversity of chapter activities. Examples include hosting an ASA DataFest, participating in a regional science and engineering fair, sponsoring an award to recognize a region's talented undergraduates, and hosting Counsel of Chapters traveling short courses.

I encourage you to seek out your local chapter and become involved. I'm sure you will find

Resources to Flatten Your Learning Curve

ASA Web-Based Lectures

<https://bit.ly/3yYdhzP>

Section Awards

<https://bit.ly/3RBTuP9>

ASA Meetings

www.amstat.org/meetings

Chapter Chatter

<https://bit.ly/3chQQxP>

Count on Stats

<https://bit.ly/3chJ1Is>

Committee Spotlight

<https://bit.ly/3nZFnFI>

ASA Community

<https://community.amstat.org/resources>

STATtr@k

<https://stattrak.amstat.org>



Katherine Ensor

colleagues who share both your professional and community service interests.

Before you continue reading, take a minute to guess the number of annual downloads/views of articles published in just two of our journals, namely *The American Statistician* and the *Journal of the American Statistical Association*. The numbers are 480K and 652K respectively. No single metric can communicate the value of a journal, but this is exceptional. Looking at these numbers and similar metrics for other ASA publications reinforces for me that access to our science is a significant member benefit.

The ASA publishes 12 journals for which ASA members have free online access and an additional four journals co-published with other societies for which ASA members have access at a reduced rate. By the way, if you are having trouble navigating the new member portal to access the ASA's journals, the short video at <https://bit.ly/3P6Xm8Y> might help.

As ASA president, I've also come to appreciate the challenges associated with representing our profession. Our strategic plan states the following:

Decision-making discussions in public policy, including healthcare and science policy, must be guided by sound data and competent statistical analysis. The ASA and the statistical profession should actively participate in these discussions to promote the use of appropriate data and effective methods, and to ensure that the statistical sciences receive an appropriate share of public funding for scientific research and education.

I am called on to represent the position of the ASA, a responsibility I share with my colleagues on the ASA Board of Directors. I make a clear distinction when I am speaking for the ASA and when I am expressing my own scientific views.

Our decision-making for making statements about a policy-related issue is guided by the process noted at <https://bit.ly/3Prslv4>. To issue a public statement is always challenging, but I very much appreciate the ASA's thoughtful and structured approach.

The ASA also advocates for the National Institutes of Health and National Science Foundation budgets to support our scientific work and follows the developments of the annual appropriations to support the federal statistical agencies. For example, we sent a letter in support of fiscal year 2023 funding for the National Institute of Justice (<https://bit.ly/3om46nX>).

In addition to issuing statements and letters, the ASA supports initiatives such as Count on Stats, which works to inform the public, key stakeholders, and influencers about the importance of federal statistics.

The ASA also has more than 60 standing committees that address a wide range of professional issues, select award winners, and advocate for statistics in policy and science. For example, the External Nominations and Awards Committee works with the president and executive director and staff to nominate members for prestigious national and international recognition, as well as government positions. Recent successes include the appointment of Claire Bowen and Ron Prevost to the Census Scientific Advisory Committee and Cynthia Rudin's successful nomination for the \$1 million Artificial Intelligence Prize.

Another important initiative is the Committee on Membership Retention and Recruitment's focus group effort. The goal is to learn from you about how the ASA can better serve your professional needs. CMMR has conducted several virtual sessions, and more are planned. However, we want to hear from you, even if you are not able to participate in a focus group. You can share feedback with the committee at <https://bit.ly/3aLoonk>.

I am truly amazed by the dedication to our profession demonstrated by all the committee members and encourage you to check out the magazine's Committee Spotlight feature to learn more.

I have also come to appreciate how the ASA uses its strategic plan to guide decision-making. One strategic theme is "Ensuring the Future of Our Profession." Therefore, we have a variety of professional development activities, including short courses at our meetings, webinars, and workshops. One such upcoming workshop is "StatXW: Preparing to Be an Expert Witness," which will be offered virtually in the fall. Join Director of Strategic Initiatives and Outreach Donna LaLonde and me to learn about serving as a statistical expert witness.

Professional development also happens informally when members share resources and knowledge via the ASA Community and STATtr@k. The questions asked and answered on ASA Connect are "just in time" professional communication and speak to a vibrant community of statisticians.

I appreciated more than ever the opportunity to attend JSM in person this year. While we have all become experts at virtual communication, it was exceptionally nice to celebrate our community and shared professional contributions and interests face-to-face. It was also wonderful to meet many of you in person.

I want to close by recognizing those members who recently became ASA Fellows and those who received awards at JSM. Recognition of member contributions and accomplishments is an important component of our community.

As always, I'm honored to serve as your president.



MORE ONLINE
Talk to your colleagues about ASA membership. Every time you recruit a new member, you strengthen the ASA. Visit <https://bit.ly/3IZURTN>.

What, How, and When to Teach Data Science and Statistics

Nicholas Horton, *JSDSE* Editor

The July 2022 issue of the *Journal of Statistics and Data Science Education* is freely available at <https://bit.ly/3uIvxLX>. The issue includes nine articles, plus an interview with the University of Minnesota professor Robert delMas, this year's recipient of the George Cobb Lifetime Achievement Award from CAUSE.

Discussions and suggestions about “what to teach” arise in “Developing Students’ Intuition on the Impact of Correlated Outcomes,” by Ashley Peterson; “Implementing a Senior Statistics Practicum: Lessons and Feedback from Multiple Offerings,” by Sierra Paloian, Kirsten Doehler, and Alexandra Lahetta; a data sets and stories paper titled “Regression, Transformations, and Mixed-Effects with Marine Bryozoans,” by Ciaran Evans; and a brief communication paper titled “Data Discovery Challenge Using the COVID-19 Data Portal from New Zealand,” by Jon MacKay.

Three papers explore “how to teach,” including “Think-Aloud Interviews: A Tool for Exploring Student Statistical Reasoning,” by Alex Reinhart, Ciaran Evans, Amanda Luby, Josue Orellana, Mikaela Meyer, Jerzy Wiczorek, Peter Elliott, Philipp Burckhardt, and Rebecca

Nugent; “Teaching Statistics to Struggling Students: Lessons Learned from Students with LD, ADHD, and Autism,” by Ibrahim Dahlstrom-Hakki and Michelle L. Wallace; and “An Evaluation of College Students’ Perceptions of Statisticians,” by Gita Taasoobshirazi, Madeleine Wagner, Austin Brown, and Colene Copeland.

Finally, two papers—“Opportunities for K–8 Students to Learn Statistics Created by

States’ Standards in the United States,” by Travis Weiland and Anita Sundrani, and “Reflections on the Current and Potential K–12 Impact of the *Journal of Statistics and Data Science Education*,” by Michael Dalton and Randall E. Groth—focus on presecondary education and involve important questions about “when to teach” data science and statistics, given the dramatic growth in these areas before college. ■

Curiosity Cup Offers Analytics Skills Competition

The Curiosity Cup is a global SAS student competition that brings teams together to test and grow their knowledge of data science and analytics. Registration opens in August.

Requirements include the following:

- Teams must have two to four students who are enrolled part time or full time at the time of paper submission.
- Students must be at least 18 years old at the time of paper submission.
- Teams must have a faculty or educator adviser.

Details can be found on the SAS website at <https://bit.ly/3zOGX0e>.



Papers Wanted for Supplemental Issue of *Prevention Science*

David M. Murray, Office of Disease Prevention at the National Institutes of Health; Patrick Heagerty, University of Washington; and Melody S. Goldman, New York University

Over the last year, the National Institutes of Health has launched several initiatives focused on developing and testing multilevel interventions to address structural racism and other structural determinants as drivers of health disparities across the United States. Additional initiatives are anticipated from multiple NIH institutes, centers, and offices, as well as from ADVANCE: Advancing Prevention Research for Health Equity, a new trans-NIH effort from the Office of Disease Prevention to encourage new prevention interventions and strategies to deliver existing evidence-based interventions and preventive services in populations that experience health disparities.

Effectively addressing structural racism and other structural determinants to improve health equity requires rigorously tested and evidence-based multilevel interventions.

Effectively addressing structural racism and other structural determinants to improve health equity requires rigorously tested and evidence-based multilevel interventions. However, studies that evaluate multilevel interventions face specific challenges that require specialized design and analytical approaches. New research is needed to develop and test multilevel interventions focused on addressing structural racism and health disparities. Investigators would benefit from guidance on the appropriate design and analytic methods for evaluating these multilevel interventions, but such guidance is currently

scattered across a wide range of sources and disciplines that do not often interact.

The ODP is sponsoring a supplemental issue of the journal *Prevention Science*, the official publication of the Society for Prevention Research, to bring together current thinking and new ideas about design and analytic methods that would be appropriate for studies aimed at reducing health disparities, including strategies for balancing methodological rigor with design feasibility, acceptability, and ethical considerations. Of particular interest are design and analytic methods for parallel group- or cluster-randomized trials (GRTs), stepped-wedge GRTs, group-level regression discontinuity trials, and other methods that are appropriate for evaluation of multilevel interventions.

Investigators should submit a two-page manuscript to ODP-Director@mail.nih.gov by September 1 outlining the design, analytic, and sample size methods they propose, together with any new research they propose to evaluate those methods.

By October 1, the guest editors will invite selected authors to submit a full manuscript. They will make recommendations to the editor for publication, and the editor will make the final decision regarding the disposition of each manuscript.

Initial manuscript drafts are due February 1, 2023, and the anticipated publication of the supplemental issue is in March 2024.

Each manuscript will need to provide an example multilevel intervention that could be proposed to address structural racism or other structural determinants and reduce health disparities. Each manuscript will also need to discuss the strengths and weaknesses of the proposed approach relative to existing methods.

Details about the supplemental issue can be found on the ODP website at prevention.nih.gov/CallForPapers. Instructions to authors for manuscript submissions are available on the journal website at www.springer.com/journal/11121. ■



MY ASA STORY

Anja Zgodic

Biostatistics Doctoral Student

I was fortunate that my professors introduced me to the ASA early on in my studies in biostatistics. It was at the Joint Statistical Meetings that I started developing my presentation and networking skills. As a master's student, I could not think of better training in scientific communication than giving a talk at JSM and answering audience questions. Networking at the conference and participating in JSM Career Service events provided me with opportunities post-graduation.

Later, as I contemplated returning to graduate studies, the ASA was once again there to support my next steps with resources available for prospective students. These resources included data compiled by ASA members on all available biostatistics and statistics programs in the United States, as well as baseline information about each program. An important factor for me was finding a program that was well balanced in terms of gender representation, and the ASA had this data compiled. Using these resources, I was able to begin doctoral studies in a department that reflected my values and learning goals.

As a biostatistics doctoral student at the University of South Carolina, I have had the opportunity to participate in events organized by the local ASA chapter. This has helped me connect with members of the local statistics community, get to know my professors and classmates better, and learn from talks given by invited scholars. It is also through help from the ASA that I was able to locate doctoral funding opportunities and apply successfully. Among resources provided for early-career statisticians is a comprehensive list of funding provided by organizations in government, industry, and academia.

Recently, with the transition to online work and studies brought about by the COVID-19 pandemic, topics of accessibility and inclusivity have gained momentum and visibility. To continue highlighting the importance of these topics, a group of ASA members came together to revive the ASA's Committee on Statistics and Disability (<https://bit.ly/3yYZ5ro>). Last year, I accepted the role of committee chair. After enjoying benefits provided by

ASA membership for a few years, it was time for me to get involved and give back to the community that long supported me.

I and fellow committee members have reformulated the CSD's charge to incorporate the ASA's commitment to inclusivity and accessibility and to promote best practices, as well as universal design within the statistics community and broader. We recently described our latest initiatives in the Committee Spotlight column in the December 2021 issue of *Amstat News* (<https://bit.ly/3o4JL64>).

I look forward to continuing to interact with the ASA throughout my career and beyond, whether it is by volunteering, engaging with other ASA members, or leveraging resources provided by the ASA.

The CSD's work was also discussed in the February episode of *Practical Significance* hosted by the ASA's Donna Lalonde and Ron Wasserstein (<https://bit.ly/3Rt1py1>). Finally, we co-sponsored three sessions at JSM 2022.

I would like to invite any ASA member interested in promoting inclusivity and accessibility in the statistics community to contact me at azgodic@email.sc.edu or a member of the CSD to be included in our initiatives. I look forward to continuing to interact with the ASA throughout my career and beyond, whether it is by volunteering, engaging with other ASA members, or leveraging resources provided by the ASA. ■

JEDI CORNER

So Much to Do, So Little Time

The Justice, Equality, Diversity, and Inclusion (JEDI) Outreach Group Corner is a regular component of Amstat News in which statisticians write about and educate our community about JEDI-related matters. If you have an idea or article for the column, email the JEDI Corner manager at jedicorner@datascijedi.org.

By the time you read this article, the 2022 Joint Statistical Meetings in Washington, DC, will either be about to start or underway. This month's article introduces readers to the plethora of JSM sessions and events either co-sponsored by the JEDI Outreach Group or related to JEDI initiatives.

On Sunday, August 7, our program starts out strong with multiple technical sessions. During the 2:00 – 3:50 p.m. slot, we are co-sponsoring the following three sessions:

- **Perspectives on Nontraditional Grading in Statistics Courses**, a topic-contributed panel featuring Eric Reyes of Rose-Hulman Institute of Technology, Adam Loy of Carleton College, Jillian Downey of Gustavus Adolphus College, and Katherine Kinnaird of Smith College
- **Recent Advances in Statistical Methods Applied to Racial Equity Research**, an invited paper session highlighting the research of Anarina Murillo of New York University, Ruby Lee Bayliss of the Dornsife School of Public Health at Drexel University, Guangzi Song of Drexel University, Miguel Marino of the Oregon Health and Science University, and Melody Goodman of New York University
- **Moving Toward Justice, Equity, Diversity, and Inclusion in the Statistical Sciences**, an invited panel featuring Deirdre Middleton of RTI, Kimberly Sellers of Georgetown University, Eunice J. Kim of Microsoft, Ryan Machtmes of the University of Minnesota, Therri Usher of the US Food and Drug Administration, and Mark Otto of the Fish and Wildlife Service.

If you aren't too tired from those, we are co-sponsoring the following two in the Sunday 4:00 – 5:50 p.m. slot:

- **Professional Strategies in Statistics: Mentoring Students for Professional Success**, an invited panel featuring Brittney Bailey of Amherst College, Emily H. Griffith of North Carolina State University,



Jo Hardin of Pomona College, Renee Moore of Drexel University, and Venessa Singhroy of Queensborough Community College

- **Data-Driven Ethics as Statistical Practice**, a topic-contributed paper session highlighting the work of Suzanne Thornton of Swarthmore College, David Corliss of PeaceWork, Brandy R. Sinco of the University of Michigan Center for Healthcare Outcomes and Policy, and Sarah Warner of the HHS Office of Trafficking in Persons.

Monday, August 8, is the most engaging day with regard to JEDI-related sessions and events. From 8:00 – 10:00 a.m., the Korean International Statistical Society, International Chinese Statistical Association, International Indian Statistical Association, and American Statistical Association are jointly sponsoring the **ASA Asian Forward-Career Development Workshop**.

There will also be the following two JEDI-sponsored invited paper sessions occurring from 8:30 – 10:20 a.m.

- **Making ASA an Anti-Racist Organization: Report from the ASA Anti-Racism Task Force** with papers



Jana Asher, associate professor and director of statistics education, Slippery Rock University



JSM 2022 will be held in Washington, DC, August 6–11.

presented by Samuel Echevarria-Cruz of the Austin Community College District, Portia Exum of SAS Institute, and Emily Hadley of RTI International

- **Teaching Social Justice Through Statistics and Biostatistics: The Case for a DEI-Infused Curriculum** with papers by Jana Asher of Slippery Rock University, Rebecca Roberts Andridge of The Ohio State University, Sybil Prince Nelson of Washington and Lee University, and Rongwei (Rochelle) Fu of the School of Public Health at the Oregon Health and Science University.

The session **Diversity and Inclusion in Analytics Roles in the Professional Sports Industry** follows from 10:30 a.m. – 12:20 p.m. This is a topic-contributed panel involving Bill Burgos of the Minnesota Timberwolves, John Saintignon of the International Basketball Federation, Jonathan Martinez of the Las Vegas Raiders, and Mauricio Elizondo of the Association for Tennis Professionals.

The JEDI Outreach Group is co-sponsoring a 2:00 p.m. – 3:50 p.m. invited panel titled **Delivering Data Differently**, which features Mark Hansen of Columbia University, Ben Rubin of Ear Studio, and Kimberly Arcand of Harvard University.

Other afternoon and evening JEDI-related events on Monday mostly include committee meetings and social gatherings. Both the Committee on International Relations in Statistics and the Committee on Statistics and Disability hold their business meetings from 12:30 – 2:00 p.m. in the

Marriott Marquis. Then, from 2:00 – 4:00 p.m., the Committee on Women in Statistics will hold a business meeting and social hour in the Marriott Marquis; the business meeting will occur during the first hour, followed by the social hour. Anyone can attend these events and share ideas for ASA and COWIS partnerships (e.g., proposed JSM 2023 invited sessions), an analysis project regarding diversity and inclusion, or committee operations. The COWIS social hour will be an opportunity for ASA members to drop by and chat with one another about JSM, the work of COWIS, and any fun or serious COWIS-related ideas.

Between 4:00 – 5:00 p.m., JSM attendees can visit the Committee on Scientific Freedom and Human Rights meet-up in the Marriott Marquis. The LGBTQ+ Advocacy Committee Business Meeting will be in the Marriott Marquis from 4:00 – 5:30 p.m., and their reception will follow from 5:30 – 7:30 p.m. The fun continues from 6:00 – 7:30 p.m. in the Marriott Marquis, where the Caucus for Women in Statistics will hold its reception and business meeting. Finally, between 6:00 – 8:00 p.m., the Korean International Statistical Society Annual Meeting will occur in the Marriott Marquis.

Still have energy after Monday's jam-packed schedule? If yes, then be sure to wake up early for the Tuesday, August 9, offerings. The JEDI Outreach Group is sponsoring an invited panel from 8:30 – 10:20 a.m., titled **Promoting Diversity in Sports Analytics** and featuring Christien Wright of the Milwaukee Bucks, Sameer Deshpande of

Whether you are an existing member
of the JEDI Outreach Group or
interested in JEDI-related work, there is
something for everyone in the
JEDI-sponsored program at JSM.

UW-Madison, Rebecca Nugent of Carnegie Mellon, Arielle Dror of Zelus Analytics, and John Tobias of The University of North Carolina at Charlotte.

There are two JEDI-sponsored sessions during the 10:30 a.m. – 12:20 p.m. slot:

- **Using Statistics to Advance Human Rights**, an invited paper session featuring the work of Alicia Carriquiry and Kori Kahn of Iowa State University with discussion by Nancy Reid of the University of Toronto
- **Transforming Higher Education to Achieve Equity**, a topic-contributed panel in CC-151A with Julia L Sharp of Colorado State University, Shirley Malcom of AAAS, and Abbe Herzog of Transforming Post-Secondary Education in Mathematics (TPSE Math).

The highlight of our programming is the JEDI Outreach Group networking event on Tuesday from 12:00 – 1:30 p.m. in the Marriott Marquis.

Afternoon events continue with a JEDI Outreach Group co-sponsored invited paper session from 2:00 – 3:50 p.m., titled **Pioneering Statistical Methods to Alleviate Health Disparity and Achieve Health Equity** with presentations by Hyokyung (Grace) Hong of the National Cancer Institute, Loni Philip Tabb of the Dornsife School of Public Health at Drexel University, and Chen-Pin Wang of The University of Texas Health Science Center at San Antonio.

From 3:00 – 4:00 p.m., Statistics Without Borders will hold its annual meeting. Members Anja Zgodic (azgodic@email.sc.edu) and Shu-Min Liao (sliao@amherst.edu) from the Committee on Statistics and Disability will facilitate a birds-of-a-feather meeting from 4:00 – 5:00 p.m., organized by the Section on Statistics and Data Science Education. The meeting's topic is **Job Hunting with a Disability or Impairment for a Position in a Statistics-Related Field**. Contact the facilitators for more information.

The last event of the day is the Committee on Minorities in Statistics open business meeting and mixer from 6:30 – 8:00 p.m. in the Marriott Marquis.

Now entering the home stretch, Wednesday, August 10, features three JEDI Outreach Group co-sponsored sessions:

- **Systemic Racism and Its Population Health Impacts** from 8:30 – 10:20 a.m. is a topic-contributed panel featuring Melody Goodman of New York University, Michele Andrasik of the Fred Hutchinson Cancer Research Center, Yates Coley of Kaiser Permanente Washington Health Research Institute, and Sahar Zangeneh of RTI International.
- **Being Human in Statistics and Data Science: Humanistic Pedagogical and Curricular Innovations** is an invited panel featuring Emma Benn of the Icahn School of Medicine at Mount Sinai, Donna LaLonde of the ASA, Felicia Simpson of Winston-Salem State University, Rebecca Wong of West Valley College, and Shu-Min Liao of Amherst College.
- **Data Privacy and Analytics in Professional Sports** is a topic-contributed panel featuring Carlos Jimenez, a former United States Olympics Committee physical therapist, Lorena Martin of the University of Southern California, Roderick Moore of the NFL Atlanta Falcons, and Somak Sarkar of the Minnesota Timberwolves.

Finally, on Thursday, August 11, the JEDI Outreach Group is sponsoring an invited paper session from 8:30 – 10:30 a.m., titled **Making Data and Statistics Impactful Through Inclusivity, Powerful Collaboration, and Effective Innovation** and with papers by Katherine B. Ensor of Rice University, Brianna Blaser of the University of Washington, Ryan Tibshirani of Carnegie Mellon University, and John Scott of the Center for Biologics Evaluation and Research at the US Food and Drug Administration.

JEDI-related events do not conclude with JSM. Chuck Coleman (chuckcoleman@yahoo.com) and Mark Otto (mark.ot2o@gmail.com) from the Committee on Statistics and Disability will facilitate a second birds-of-a-feather session August 17 from 1:30 – 2:30 p.m. over Zoom, titled **In a Statistics-Related Position in Industry/Academia/Government, What Mechanisms Are Available to Disclose Disability/Impairment, and What Reasonable Accommodations Exist?** Contact the facilitators for more information.

Whether you are an existing member of the JEDI Outreach Group or interested in JEDI-related work, there is something for everyone in the JEDI-sponsored program at JSM this year. ■

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New Two-Year College Data Science, Analytics Programs on the Rise



Dozens of two-year colleges have started data science and analytics programs, with many offering degrees or certificates. To learn more, *Amstat News* reached out to several—including some that participated in the ASA-hosted and National Science Foundation–funded 2018 Two-Year College Data Science Summit (<https://bit.ly/3RpR6ed>)—to learn about their program details. Following are reports from the County College of Morris, Wake Tech, Montgomery College, and College of DuPage.



COUNTY COLLEGE OF MORRIS, NEW JERSEY



Kelly Fitzpatrick, associate professor of mathematics, has taught at County College of Morris since 2010. Prior to that, she worked in hedge fund management and developed

quantitative strategies for various financial firms. Fitzpatrick is a graduate of Columbia University and the State University of New York at Geneseo. She is also the principal investigator for National Science Foundation ATE grant #2000887, Expanding Pathways to a Data Science Career by Developing a Certification in Data Science and Analytics,

and chair of the ASA/AMATYC Joint Committee.

Program Information

Degree/certificate name: Data Analytics Certificate (16 credits)

Website: <https://bit.ly/3O5dkz5>

Year in which first students graduated: 2021

Number of students currently enrolled: 14

Partnering departments: Mathematics, computer science, and engineering

Program format: In person with some courses offered online; 16 credits over two semesters

MORE ONLINE
For graduate data science and analytics programs, visit <https://bit.ly/3c9bAHR>.

Describe the credentials you offer in data science/ analytics, basic elements of the curriculum, and how the curriculum was developed.

The curriculum was developed using the research and tools from the Education Development Center and Two-Year College Data Science

Summit. CCM also has a data science advisory board that consists of industry partners such as Intel and Atlantic Health.

The data science initiatives at CCM are supported by a \$235,000 National Science Foundation grant for Expanding Pathways to a Data Science

Career by Developing a Certification in Data Science and Analytics.

There is no programming experience required and low mathematical barriers to entry. Students will learn R, Python, Tableau, SQL, and machine learning techniques.

What was your primary motivation(s) for developing a data science/analytics program?

The motivation was to offer an in-demand, cutting-edge curriculum to our students in an area that offers high employment opportunities.

What's been the reaction from students so far?

The students have been excited to learn about data science and the new technologies the courses offer. Students appreciate the opportunity to learn in-demand skills such as R, Python, Tableau, and SQL.

Every discipline or program should contain at least one course in data science or data visualization. Data drives business decisions and has become the most lucrative commodity of the modern world.

How has COVID-19 affected labor market demand in your region?

There is a strong labor market demand in Morris County for data practitioners, and several large firms are looking for data analysts and data scientists. The

corporations in New Jersey looking for data analysts/scientists include those from pharmaceutical, finance, consulting, and health care. In the recent State of Innovation Report for NJ, digital technologies, big data, AI, and machine learning ranked as the top skill sets in high demand with low supply.

What were the biggest challenges for establishing the program?

The biggest challenges were going through the approval process that has an intense hierarchical system. This approval process is extremely lengthy with bottlenecks along the path.

What are you doing to attract and retain diverse students to your program?

To recruit new students, we host several events on campus such as ASA DataFest. We also host a data science table at our open houses and will be hosting a data science day in the fall.

For graduates employed in data science/analytics, please describe the types of jobs they took and sector and wage data. For graduates continuing their studies, what are they studying?

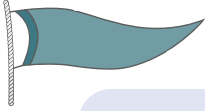
We have had students transfer to Columbia University, Ramapo College, and the University of Michigan. We also have a student completing his PhD in machine learning at Dartmouth.

Do you have any advice for institutions considering the establishment of such a certificate or degree?

My advice is to start early and set small goals each year toward development in data science initiatives. Over time, these small goals will turn into large accomplishments. You also need to have full support from your administrators.

What advice do you have for students considering data science/analytics studies at a community college?

In my opinion, this is the best path, and I believe every discipline or program should contain at least one course in data science or data visualization. Data drives business decisions and has become the most lucrative commodity of the modern world.



WAKE TECH, NORTH CAROLINA



Norene Kemp is head of the programming and information sciences department at Wake Tech. She holds a master's in information systems technology and a bachelor's in information systems from Johns Hopkins University. Prior to joining Wake Tech in 2019, Kemp worked at Horry-Georgetown Technical College in South Carolina for 10 years.

Program Information

Degree: Associate of Applied Science Business Analytics

Certificates: Business Intelligence; Business Analyst; Marketing Analytics; Logistics Analytics; Financial Analytics

Website: <https://bit.ly/3z3DNc3>

Year in which first students graduated: 2016

Number of students currently enrolled: 660

Partnering departments: Data science programming and support services (lead) and programming and information sciences

Program format: In person and online; courses are project-based and capstone incorporates industry mentors; degree is 66 credits; certificates are 12–15 credits

Describe the credentials you offer in data science/ analytics, basic elements of the curriculum, and how the curriculum was developed.

In August 2019 the business analytics degree program was moved from the business administration division to the information technology division under the leadership of the department head of programming and information sciences. There are three full-time faculty members who teach the nine business analytics courses.

This degree focuses on the skills needed to answer business questions or the front end of data analytics. The courses consist of Introduction to Analytics (Excel), Data Visualization (Tableau), Introduction to Analytical Programming (SAS), Applied Analytical Programming (SAS), Introduction to Predictive Modeling (Python), Applied Predictive Modeling (Python), Analytical Tools and Methods, and Advanced Analytical Tools and Methods (capstone). Students take Introduction to Data Science Programming (R) and take and learn skills in SQL. They also take a statistics course and can take a second course in statistics.

We have an advisory committee made up of local industry representatives from Wake County Information Services, Town of Cary, NC Electric Cooperatives, SAS, and Credit Suisse. Advisory committee members serve a two-year appointment and participate in information sessions, work-based-learning opportunities, and mentoring capstone students.

What are you doing to attract and retain diverse students to your program?

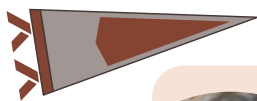
We are the only two-year community college in North Carolina to offer a AAS degree in business analytics. As of May 2022 we have a total 353 active students with 55 percent female, 16 percent Asian, 20 percent Black, 55 percent white. We offer an accelerated executive program that attracts students with advanced degrees looking to up-skill and add new skills for their current positions.

For graduates employed in data science/analytics, please describe the types of jobs they took and sector and wage data. For graduates continuing their studies, what are they studying?

Graduates have been hired as data specialists, systems analysts, data analysts, IT analysts, knowledge managers, supply chain analysts, and consultants with wages ranging from \$50,000 to \$90,000 per year.

We have also created articulation agreements with the following:

- NC Wesleyan University: AAS graduates transfer up to 60 hours from the degree and may take an additional 15 hours of approved general education credit toward their degree of choice
- Southern New Hampshire University: BS, Data Analytics
- UNC Charlotte: BS, Data Science
- William Peace University: BS, Business Analytics



MONTGOMERY COLLEGE, MARYLAND



Rachel Saidi an associate professor at Montgomery College in the math, statistics, and data science department; the college's data science program director; and AMATYC's data science subcommittee chair.

She collaborates with faculty, administrators, and industry partners to improve the program.

Program Information

Degrees: AA in General Studies STEM with Data Science Concentration; AS in Data Science; Business Analytics (in future)

Certificates: Data Science, Business Analytics (in future)

Website: <https://bit.ly/3P4fY9R>

Year in which first students graduated: 2019

Number of students currently enrolled: ~ 50 unique students

Partnering departments: Mathematics, statistics, and data science; computer science; geography; and philosophy departments

Program format: Online with free and open-source materials and software; assessments are project-based; most students are part time; capstone is a semester-long project partnering with a local industry or government organization

Describe the credentials you offer in data science/analytics, basic elements of the curriculum, and how the curriculum was developed.

For the data science certificate, students must complete five courses (16 credits): one introductory statistics class; introduction to data science; data visualization and communication; statistical methods in data science; and the capstone experience.

Students are able to complete this certificate in three semesters or two semesters if they have already taken a statistics course. All data classes are offered during fall and spring semesters, and the 100-level courses are offered during the summer semesters, as well. Data tools used include R Studio, Python, Tableau, Git/GitHub, and SQL.

The capstone course is where students display their accomplishments and the program gains its greatest visibility. Based on open data sets shared by Montgomery County, our capstone students may present their analyses to county officials and other stakeholders. The data sharing benefits both parties—students get real-world experience and county officials receive useful and sometimes eye-opening information.

We also offer students the option of earning an AA in general studies STEM with a data science concentration. This is a STEM degree with all program elective courses, including the four courses

required for the certificate. Additionally, students must take general education requirements such as a communications, psychology, or computer programming course.

We just created a new AS in data science, and one of the greatest challenges was fitting all courses into two years with the limited 60 credits. Obviously, we had to satisfy articulation agreements, including general education requirements. But beyond meeting the needs of our transfer institutions, we attempted to provide our students with the best training and skills they could acquire from us. Those skills include mathematics, statistics, data ethics, data tools, and programming. Fitting all those skills into course sequences that fit prerequisites was a puzzle that necessitated negotiations with departments such as mathematics and computer science. We navigated through new territory, because data science does not necessarily fit with what has worked in the past.

What was your primary motivation(s) for developing a data science/analytics program? What's been the reaction from students so far? From employers? How has COVID affected labor market demand in your region?

In 2015, faculty and administrators began working to create a data science certificate program

for the college. There were no four-year schools with data science–related programs for which students could transfer into. So, they created open-ended learning outcomes that could evolve as the program changed over time. The first cohort to join the college’s data science certificate program in 2017 included 30 students. To date, we have more than 200 students who are either currently enrolled in or have taken data classes in the past.

Students comment that they appreciate the virtual classes held in the evening, making them accessible to those who work or take other classes during the day, and that all textbooks, software, and course materials are free and open sourced.

These aspects are crucial considerations for improving our recruiting and retention efforts. Additionally, one of our program’s greatest assets is the sheer diversity of our students’ backgrounds. Some students enter without any prior degree, while some students enter the program with prior undergraduate or graduate degrees, and age groups range from teens to retired professionals. We currently have 43 percent representation from Black and Hispanic students, and 41 percent of our students are female.

What were/are the biggest challenges for establishing the program?

Challenges we perpetually face include establishing appropriate articulation agreements with four-year institutions, advertising the program to prospective students, identifying students who are the right fit for learning data science skills, and connecting more students to networking and career opportunities. We continually need to address the question of “what is next” in terms of internship and career opportunities for when students complete the certificate or degree.

At the two-year college level, we must address differing requirements for transferring to different types of programs within various institutions. We must provide the greatest number of skills so a student can use them to directly find employment. We must work to teach students who enter our courses with varied backgrounds in mathematics, statistics, communications, and coding. Because our program is small, we continually have to advertise to the community to ensure we have enough enrollment for each of our classes.

I believe that, currently, everyone should learn at least a little data science to be a more informed data consumer and producer. What better place to start than at a local community college?

What are you doing to attract and retain diverse students to your program?

We are following best practices regarding recruiting and retaining diverse students, which include strategies mentioned above such as holding classes in the evening virtually and only using free and open-source materials.

We have identified high schools in our county with high proportions of underserved and minority students and will direct our recruiting efforts toward these schools. We will also start an early college in data science program within the next year. We understand our students enter our 100-level classes with a wide range of skills, so we attempt to be welcoming of these diverse levels and accommodate all students as they acquire the skills they need to complete the program.

For graduates employed in data science/analytics, please describe the types of jobs they took and sector and wage data. For graduates continuing their studies, what are they studying?

Many of our graduates who became employed after completing the certificate already had prior undergraduate or graduate degrees and found it easy to find jobs. Many were hired with local organizations who contract out to the government. Other students were using the certificate



to bolster their credentials to launch their graduate applications in data science. A small number of students completed the associates degree and transferred to our local four-year institution for a BS in information science. I only know anecdotally of a few students who are struggling to find a job or continue with their data science education.

Do you have any advice for institutions considering the establishment of such a certificate or degree?

Be sure to garner support from administrators, because they are absolutely necessary to shepherd the certificate or degree through all levels of approval.

There is no need to wait for funding to begin developing the program. It is a long process that can begin prior to having all the details hashed out.

Establish an advisory board with members from diverse settings; their expertise can be of great value.

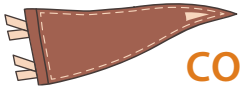
Join local and national organizations and become involved—the American Statistical Association, American Mathematical Association of Two-Year Colleges, Academic Data Science Alliance, and Mathematical Association of American—to name a few.

Attend webinars, conferences, symposiums, meetings—anything to learn more about data science education and get to know people who are working in this area.

What advice do you have for students considering data science/analytics studies at a community college?

I believe that, currently, everyone should learn at least a little data science to be a more informed data consumer and producer. What better place to start than at a local community college? If students have never tried coding before, they can try a noncredit or 100-level data class in R or Python. Though coding is not for everyone, a good starting point to “dip your toes in” is at the community college.

If you are interested in transferring to a four-year institution, be sure to ask questions about transferability of courses. Inquire about what internship and employment partners the school might have to gain that all-important experience. Build a strong profile on LinkedIn: many of our students have found internships and been contacted about jobs by posting their data science credentials there.



COLLEGE OF DUPAGE, ILLINOIS



Dejang Liu, a full-time faculty member of computer and information science at the College of DuPage, has been teaching computer subjects for more than 25 years. Liu was a 2014 Fulbright Scholar and earned a master's degree in mechanical engineering from the University of Minnesota and an MBA from the University of Illinois in Chicago. He also

earned an EdD in adult higher education specializing in data analysis from Northern Illinois University.

Program Information

Certificate: Data Analytics

Website: <https://bit.ly/3P6s0iS>

Year in which first students are expected to graduate: 2023

Program format: Online, in person, and hybrid; part time and nontraditional

Describe the credentials you offer in data science/ analytics, basic elements of the curriculum, and how the curriculum was developed.

This certificate requires 20 credits from the following courses: Understanding Computers, Information, and Systems; Microsoft Office for Professional Staff; Data Analysis with Spreadsheet; Advanced Spreadsheets with Business Intelligence; Database Application; Data Analytics and Visualization; and Statistics.

This program offers students who already possess a college degree the opportunity to enroll in a data science master's degree at Elmhurst University after they complete the certificate at College of DuPage.

Since the main purpose of this certificate is to train an entry-level workforce, no coding skill/ knowledge is required. An associate's degree in data science, which is in the development process, does require a Python coding class.

What was your primary motivation(s) for developing a data science/ analytics program? What's been the reaction from students so far? From employers? How has COVID affected labor market demand in your region?

The college received many requests from the business community to offer a data analytics-related program to train the workforce. The data analytics

program is a foundation for the AI program, which was also developed by the department.

Student enrollment increases from term to term. Since it is feasible for employees to work from home, COVID did not affect the labor market negatively.

What were/are the biggest challenges for establishing the program?

Qualified instructors and training programs available to faculty.

What are you doing to attract and retain diverse students to your program?

The college has an open-door policy, so any student can take classes as long as they meet the prerequisites.

For graduates employed in data science/ analytics, please describe the types of jobs they took and sector and wage data. For graduates continuing their studies, what are they studying?

Students with a BS degree in any major can enroll in the data science master's degree program at Elmhurst University based on the articulation agreement between the two institutions.

Do you have any advice for institutions considering the establishment of such a certificate or degree?

Seek support from the math department and any business-related departments (e.g., accounting, marketing, management, etc.). ■

MORE ONLINE

For graduate data science and analytics programs, visit <https://bit.ly/3RZzhD4>.

STATtr@k

Using Sports Analytics, Storytelling with Data to Inspire Interest in Statistics

When were you first interested in statistics applications in sports?

Each time we used to stay at hotels as a kid, I would open *USA Today* and look at two things. First was the sports page, and second was the infographic they would always show in the corner on the front cover. So, sports and statistics have always been two of my passions—I just had to wait a little while until there were careers in the intersection of those fields.

What are your professional duties as a sports statistician?

Our job is to use data to enhance the game of football, and that covers anything that relates to the on-field tendencies of players, coaches, and teams. We have metrics relating to game excitement, fairness and equity, player health and safety, officiating, and pace of play. We also play a role in innovation regarding the future of the game.

What path did you take to become a sports statistician?

I never had the goal of being a sports statistician. Instead, once I realized my passion for analyzing data, my focus was more generally on building skills that could translate to careers in analyzing or teaching statistics. That path was a mathematics major at Bates College, high-school teacher (and assistant football coach!), six years of grad school at the University of Massachusetts - Amherst and Brown, and then four years at Skidmore College as an assistant professor. None of those roles were explicitly designed to end in a sports statistician role, but between the public speaking, subject-specific expertise in football, ability to teach and work with other researchers, technical/coding skills, and, most importantly, evolution of the sports world, the stars aligned.

Tell us about your typical day at work.

We have a football analytics team of seven folks right now, and so most of my time involves ensuring the short- and long-term success of that group. We are a mix of both junior analysts and successful data scientists covering a variety of disciplines within the game. I will also spend a good amount of time coding—working to build new metrics, improve old ones, or create reports or presentations based off our work. In season, we are responsible for reporting on the season as it progresses, and we work with the NFL's Competition

Committee each offseason when it comes to rules changes and ways to enhance the game.

What skills and academic training (e.g., college courses) are valuable to sports statisticians?

Here are a couple avenues for folks to think about:

- Most statistics or data science courses will in some way aid a career in sports data. One of the first ways I got started in the field was by taking the methods I learned that week in grad school and seeing if there was a corresponding way to answer a sports question with them. Between the Poisson (goals and penalties) and binomial (win/loss, made/missed) distributions, hierarchical modeling (players as random intercepts), spatial statistics (heat maps), random forests (win probability models), and survival analysis (time until an injury), sports is an excellent sandbox to play in while improving your statistics acumen. Even better, most sports data sets are free and can be found online.
- Volunteer with a local team or sports organization. My time helping coach high-school football was invaluable to what I do now at the league office. Knowing what, for example, coaches are looking for, how to make a scouting report, or how officials call the game can improve the questions you are asking with data. Additionally, improving skills in how to communicate with folks who are not data experts is something we are constantly striving for.

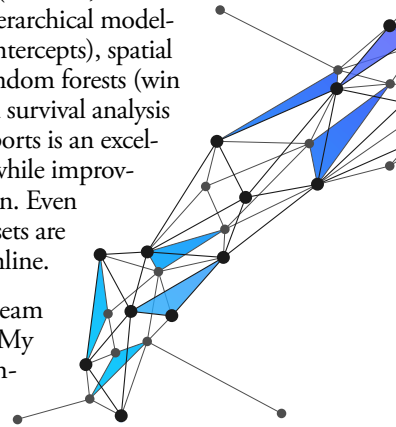
Are there specific data-management software or statistical tools you find especially helpful in your work?

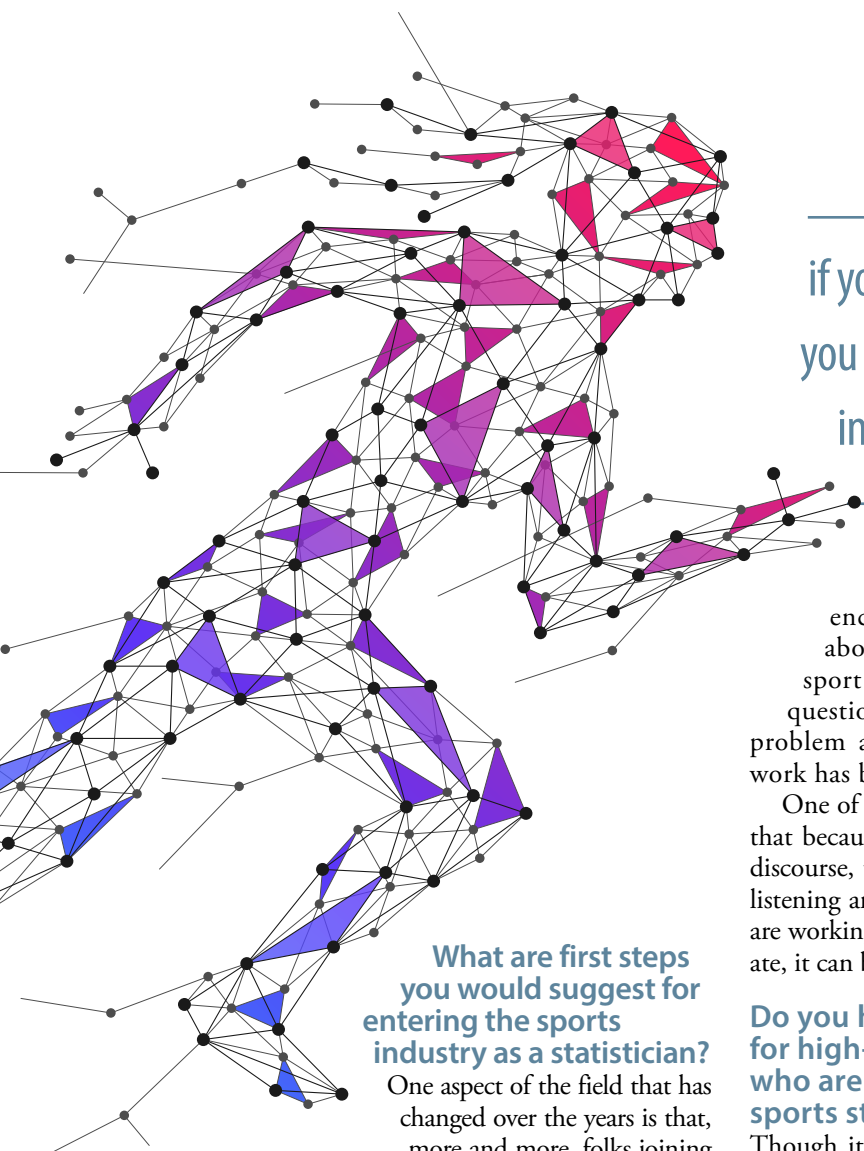
Our Football Data and Analytics team is a mix of R and Python, and most of my coding is done in R. Aggregating to the NFL, I'm guessing it's about 60 percent R, 30 percent Python, and 10 percent other languages (e.g., Stata, SAS, etc.).

For tools, nothing beats a powerful visualization. Even the most complex of our models are almost always distilled into something easier to interpret.



Mike Lopez, associate editor of the *Journal of Quantitative Analysis in Sports*, is a senior director of football data and analytics at the National Football League and a former assistant statistics professor at Skidmore College. In 2020, he was honored with the American Statistical Association's Statistics in Sports Significant Contributor Award.





What are first steps you would suggest for entering the sports industry as a statistician?

One aspect of the field that has changed over the years is that, more and more, folks joining teams have already built a portfolio with examples of work. In most cases, this is a good thing, as it puts less emphasis on what degree you have or where you went to school and more focus on the skills you can bring to a team.

At the NFL league office, for example, our group puts on a data science competition each year called the Big Data Bowl, in which the goal is explicitly to find talented folks who can handle the league's player tracking data. In four years of the competition, more than 30 participants have gone onto jobs with NFL teams or companies that analyze NFL data. You can learn more about the Big Data Bowl at <https://bit.ly/3aBlotf>.

Are there particular websites for the interested student to visit to learn about working in sports data analytics?

Most job posts are on Teamworks. But more than any place to learn about the field, I would

if you are working in a domain in which you are passionate, it can be fun to solve interesting questions.

encourage folks starting out to think about interesting questions in whatever sport they are interested in. What is the question that needs to be addressed? What problem are you trying to solve? What other work has been done in the field?

One of the fun parts about working in sports is that because it is such a passionate area of public discourse, there is a lot that can be learned just by listening and problem-solving. Additionally, if you are working in a domain in which you are passionate, it can be fun to solve interesting questions.

Do you have other general advice for high-school or college students who are interested in a career as a sports statistician?

Though it is certainly a great time to work on a team in sports analytics, more broadly, there are only about 130 professional sports teams in the big four North American leagues. That is not a ton of jobs each year, and even if you do land one, it may come with a demanding set of hours and in a less-than-ideal location.

Outside of teams, though, there are several jobs in sports data that may also prove exciting while requiring a more reasonable workload. These could be jobs with vendors of league data (TruMedia, Telemetry, Zelus Analytics), the league offices, companies involved in sports science or sports performance, or even some college teams. Regardless, having skills that can help a professional sports team win games will always translate outside of sports, too.

Do you have a favorite sport or team?

There are 32 great NFL teams! Outside of the NFL, I grew up outside Boston, so the Bruins, Celtics, and Red Sox are most likely to capture my attention. ■

STATS4GOOD

Count on Stats: Serving the Wider Community with Data for Good



David Corliss is lead, Industrial Business Analytics, and manager, Data Science Center of Excellence, Stellantis. He serves on the steering committee for the Conference on Statistical Practice and is the founder of Peace-Work.

I was taught how to be a scientist by a dance instructor. Now, Barbara Selinger is an excellent science instructor, but I think she might be as well known for her contributions to science as I am for my contributions to dance. Yet, she distinguished herself as a math and science teacher before embarking on a stellar career in the arts. This was the person who taught me the methodology and discipline of science, embodying and communicating that all persons need to understand how science works. Everything I have done as a scientist is in part a direct consequence of Maestra Selinger's commitment to science for everyone.

This same commitment to science understanding for the general public inspires and guides many initiatives by the American Statistical Association, including Count on Stats, a public outreach program that “aims to enhance awareness of the importance, reliability, and trustworthiness of government statistics.” As data-driven policymaking has grown and developed over time, the federal data system has become more widespread in its impact and more complex.

Launched in January of 2018—the same month this column made its debut in *Amstat News*—Count on Stats provides essential information about federal data. It serves as a trusted, independent voice serving the needs of government agencies, industry, and the general public.

Count on Stats makes many resources available at <https://bit.ly/3O7iAIU>. Information and links are provided for all 13 independent federal statistical agencies, including examples of the data they offer and the primary users of the data. The site also provides links to materials from the statistical agencies—a tremendously valuable resource for understanding the data needed to support applications in data for social good. The webpage is a hub for information needed for research, grant proposals, policy development, and legislative advocacy using federal data.

Get Involved

In opportunities this month, paper and poster submissions for the ASA's Conference on Statistical Practice are open through August 18. This is a wonderful opportunity to share your D4G work and learn from others. Submit your abstract at <https://bit.ly/3o4Ez2o>.

Want to learn more about ASA efforts like Count on Stats to support the public's understanding and use of statistical science? Then listen to Episode 19 of the *Practical Significance* podcast, “Raising Public Awareness of the Statistics Profession,” at <https://bit.ly/3z4N5Ve>.

Also, check out the visualizations and live data feed from Australia supporting the emergency response to flooding at <https://bit.ly/3OAHhrj>. They are a great example of how Data for Good practitioners can support their communities during emergencies. They also provide ideas and inspiration from around the world to address needs close to home.

As an independent source of information, the website posts news articles from a wide variety of reliable sources. A particular concern for this part of Count on Stats work is posting articles focusing on the reliability of government data and statistical practices. Signing up for the email newsletter at <https://bit.ly/3APOoso> will keep you up to date on the latest news.

Count on Stats also keeps a high profile on social media, making it easy to stay in the know. You can



get the latest updates by following them on Twitter at @CountOnStats and LinkedIn (www.linkedin.com/groups/8777968).

One of my favorite Count on Stats resources is its monthly quiz on federal data sources. Each one has questions to help people get to know important data sources, with links to all the details included with the answer to each question. The quizzes from previous months are archived on the website, so reading through them makes an excellent primer on what each federal statistical agency does. Most people will be surprised by the wide variety of data available, making Count on Stats helpful in determining which data sources will provide the best support for a particular D4G project.

Count on Stats has been shepherded by the ASA science policy and advocacy team, with Science Policy Director Steve Pierson playing a major role. Count on Stats also partners with a number of organizations with an interest in the quality and reliability of federal data and furthering its service to the public. These partners, listed on the Count on Stats website, include government groups like the Data Coalition, professional groups such as the American Mathematical Society, and advocacy organizations like COSSA. Together, their shared mission to serve the greater good through good data and statistical practices make them great partners for your work of serving the greater good with data and statistics.

Supporting the work of Count on Stats and others is one way to honor the generous gifts of knowledge and inspiration all of us have received.

Almost all of us can think of an inspirational teacher in our past who supported and guided our interest in learning math and science. In our own work of using statistical science for the greater good, we can pay it forward by being the inspiration for new generations. Each of us has our own hero, and we need to remember that each of us is someone else's hero. Supporting the work of Count on Stats and others is one way to honor the generous gifts of knowledge and inspiration all of us have received. Be the inspiration for someone tomorrow that they were for you yesterday. ■

Symposium on AI in Clinical Drug Development Provides Forum to Discuss Policy

Demissie Alemayehu, Pfizer, Inc. and David Madigan, Northeastern University



Photo courtesy of Roux Institute

In his opening remarks, Kinnan Natarajan, senior vice president and head of Pfizer GBDM, set the stage by emphasizing the need for collaboration among all interested groups to optimize the potential of AI in drug development.

MORE ONLINE
View the symposium program at <https://bit.ly/3uNtK8z>.

The Symposium on Risks and Opportunities of Artificial Intelligence (AI) in Clinical Drug Development—cosponsored by Pfizer, the Roux Institute at Northeastern University, the American Statistical Association, and Columbia University—was held on June 6 at the Roux Institute in Portland, Maine. The goal of the symposium, which attracted participants from the US Food and Drug Administration, pharmaceutical industry, and major academic institutions, was to provide a forum for major stakeholders to discuss pertinent issues with policy implications for proper implementation of this emerging technology.

Kinnan Natarajan, senior vice president and head of Pfizer GBDM, set the stage by emphasizing the need for collaboration among interested groups to optimize the potential of AI in drug development while safeguarding the welfare of patients against

unintended consequences that may result from deploying technology solutions. In addition, David Madigan, Northeastern University provost, and Ron Wasserstein, ASA executive director, wished participants a successful conference.

A major attraction of the symposium was the keynote address by Khair ElZarrad, director of the Office of Medical Policy at the Center for Drug Evaluation and Research, titled “Regulations in the Age of Exponential Innovations.” He focused on the potential of real-world evidence to support decision-making and the role of AI across therapeutic development, with particular reference to the policy and operational implications, regulatory considerations, and current FDA activities.

Speakers from various institutions—including the Broad Institute of MIT and Harvard, University of Pennsylvania, Rutgers University, Columbia University, and Northeastern University—gave insightful presentations, through which many great ideas were shared and valuable lessons were learned. Industry practitioners from major pharmaceutical companies highlighted the states of AI in their respective organizations, while the online and in-person attendees posed questions that made the events lively and interactive.

The formal portion of the symposium concluded with a panel discussion on ethical issues with AI in drug development and medical research. Moderated by Marinka Zitnik of Harvard University, the panelists—which included Prasanna Rao of Pfizer, Robert Truog of Harvard University Medical School, Usama Fayyad of Northeastern University, and Robert Vandersluis of GlaxoSmithKline—debated critical issues ranging from patient privacy to the role of regulations in mitigating untoward consequences of the ubiquitous AI algorithms.

The symposium also provided networking opportunities for the in-person participants, both at the conference venue and during an evening reception held at the Roux Institute. Following the reception, Natarajan and Madigan closed the symposium with a commitment to fostering collaboration among stakeholders in the use of AI to advance medical research. ■

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\$15 A MONTH

can help pay for food and materials for an ASA StatFest or Diversity Mentoring Program event.



\$40 A MONTH

can help a student or early-career statistician attend an ASA meeting (ASA Student and Early Career Travel Fund).

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- ➔ Monthly donations enable and sustain immediate and long-range ASA activities.

Dollar amounts are based on program costs over the span of one year.

Just choose the monthly gift option on the donation page at ww2.amstat.org/giving/

Contact Amanda Malloy at amanda@amstat.org to learn more.

GiveASA



Robert Santos, Rachel Levy, and Matthew Heavner at the Science, Technology, and Policy Panel

Connecting and Influencing Our Society

Claire McKay Bowen, SDSS 2022 Program Chair

Photos by Olivia Brown/ASA

Let us come together and influence our society for the better.”

When I announced the theme and goals for the Symposium on Data Science and Statistics 2022, I wrote this sentence as my “call to arms” for our community. I envisioned helping people make new connections, especially students and early-career professionals, and elevating societal issues we as a profession can address. What we sometimes imagine and what happens in reality can often surprise us. SDSS 2022 did not disappoint in the number of surprises and insights as the first in-person ASA-supported conference since the pandemic started.

More Connections

One conference attendee told me he made one new connection at JSM 2021, which was held virtually. By lunch on the first day of SDSS 2022, he had met three new people. I heard similar stories from many others. During coffee breaks or passing people in the halls, I also



Claire McKay Bowen, SDSS 2022 program chair, speaks at the conference in June.

witnessed conference participants exchanging business cards or planning to reconnect after the conference. It seems many of us were starved for these professional connections after two years of virtual interaction.

MORE ONLINE
See additional photos of SDSS on the ASA's Flickr page at <https://bit.ly/3z29fCck>.



Attendees meet and greet each other during a poster session at SDSS.



SDSS

SYMPOSIUM ON DATA SCIENCE & STATISTICS

PITTSBURGH, PA • JUNE 7–10, 2022

I also want to highlight a fun connection I made—the informal running group. The conference hotel had a running concierge who led five of us on morning runs. These runs were a fun way to meet others at the conference and tour Pittsburgh.

More Spontaneous and Fun Conversations

On the second day, I walked to the local farmer's market and grabbed lunch with a few colleagues. As we chatted, I told how I used to buy all the baking soda from the local grocery store when working in a radiation lab. My lab needed the baking soda to neutralize the acid before disposing of it. Do I remember how this odd story came up in conversation? No. Would this type



Attendees mingle in a safe atmosphere during the SDSS Opening Mixer.

of conversation come up during a virtual event? Unlikely. Many of us in that group noted the reason we landed on random topics is because in-person environments provide the space to continue conversations long after conference sessions.

It seems many of us were starved for these professional connections after two years of virtual interaction.



Attendee Kyle Grosser, University of North Carolina, discusses an e-poster at SDSS.



The SDSS Running Group stops for a photo op with "Randy" at Randyland.



Xing Wei and Ernst Linder review the lightning poster, "Ensemble Learning Models for Biomass Estimation and Species Classification of Intertidal Macroalgae Using In-situ and Remote Sensing Spectrometry."



Andrey Vladimirovich Skripniko, New College of Florida, presents at SDSS.

More Dimensions to Take in Information

A colleague at SDSS 2022 told me taking in information in a two-dimensional space is more difficult than in a three-dimensional space. Based on my SDSS experience, I agree. Am I still fatigued after four days? Yes, but the mental fatigue is less overall than when I attend virtual conferences. Additionally, I found myself more engaged at SDSS 2022. When I attend virtual conferences, I

participate in fewer conference sessions and often take work meetings.

Looking Toward SDSS 2023

As the virtual fire crackled on the screen, Emily Dodwell, a data scientist at AT&T and the SDSS 2023 program chair, closed SDSS 2022 with a fire-side chat. To kick it off, she announced next year's theme: "Beyond Big Data: Inquire, Investigate,



Rebecca Doerge, Leonard Lucas, and Chris Volinsky offer tips for moving ahead as a statistician during the Career Panel at SDSS.

Implement, Innovate.” She said her motivation for the theme stemmed from how we as a profession tackle challenges and *innovate* creative solutions. She then *inquired* about possible changes the data science and statistics community would like to see for SDSS.

Emily suggested creating a brainstorming space in which attendees can submit a problem they would like discussed or solved. People loved the idea and suggested sessions on *investigating* new challenges or creating discussion topics.

Many students and early-career professionals found the speed mentoring sessions helpful, but wished the sessions were longer so they could meet more mentors.

Another suggestion was *implementing* “spice” levels to talks. The number of peppers would indicate if the talk is introductory, intermediate, or advanced. Many participants said they enjoyed the talks, but some talks assumed more background knowledge.

Saying I am excited about SDSS 2022 would be an understatement. I watched so many great



Margaret Betz discusses her lightning poster, “The Data Mine: Experiential Industry Practicums in Data Science,” with another SDSS attendee.

talks, connected and reconnected with numerous people, and felt energized for the future. I end my last SDSS article with the same hope as I started with: *Let us continue connecting and influencing our society for the better.* ■

ASA 2022

**Data Visualization Poster and
Statistics Project Competitions
WINNERS**

The American Statistical Association announces the winners of the 2022 ASA Data Visualization Poster Competition and Statistics Project Competition.

First-place winners received \$300, a certificate, and grade-appropriate graphing calculators for the students and advisers provided by Texas Instruments. Second-place winners received \$200 and a certificate; third-place winners received \$100 and a certificate; and honorable mentions received certificates.

The poster and project competitions are directed by the ASA/National Council of Teachers of Mathematics Joint Committee on Curriculum in Statistics and Probability. The 2022 ASA Data Visualization Poster Competition leader is Jennifer Broatch of Arizona State University. Michelle Larson of the University of Iowa is the head project competition leader.

Posters, submitted digitally either as photos of physical posters or a digital poster, are due every year on April 1. Projects are written reports submitted by students in grades 7–12 and are due on June 1.

Visit the poster competition webpage at <https://bit.ly/3Obrpv7> and the project competition webpage at <https://bit.ly/3cokJMF> for details, including previous winners, entry forms, instructional webinars, and the rubrics used for judging.

GET INVOLVED

For information about how you can start a regional poster competition or mentor students in your area, see the article appearing in the July 2011 issue of *Amstat News* at <https://bit.ly/3PBSuIV>.

You can download a flier about the ASA poster and project competitions and other K–12 statistics education programs and resources to share with your school at <https://bit.ly/2zCC9S4>.

For additional information or questions regarding how to get involved in the poster or project competitions, contact ASA K–12 Education Coordinator Rebecca Nichols at rebecca@amstat.org.

2022 Regional Poster Competition Leaders

Students outside the regional competition areas submit their posters directly to the ASA office. The posters are then judged separately by the Washington Statistical Society as part of the Other Region. The best posters from each region are sent to the national judging. Information about regional poster competitions and winners is available on the individual regional poster competition websites.

Connecticut Chapter

Statistical Poster Competition

Zhou Fan, Yale University

<https://bit.ly/3ObhHZy>

Kansas/Western Missouri

Statistics Poster Contest

Ananda Jayawardhana,

Pittsburg State University

<https://bit.ly/2ulg2uq>

Michigan Statistics Poster Competition

Dan Adrian, Grand Valley State University

<https://bit.ly/2Nf6ZC6>

Nevada K–12 Statistics Poster Competition

Elizabeth Harris, Lied STEM

Academy

<https://bit.ly/3B3DVtw>

Ohio Data Visualization Poster Competition

Jerry Moreno, John

Carroll University

<https://bit.ly/3oahivR>

Pennsylvania Statistics Poster Competition

Pete Skoner, Saint Francis University Science

Outreach Center

<https://bit.ly/2Lh0RJb>

Pullman, Washington Statistics Poster Competition

Dean Johnson, Washington State University

dean_johnson@wsu.edu

Southern California

Statistics Data Visualization Poster Competition

Rebecca Le, County of

Riverside and California State University, Long Beach

<https://bit.ly/3IUPGEI>

Washington Statistical Society Data Visualization Poster Competition (DC Metro Area)

Elizabeth Petraglia and Sabrina Zhang (co-chairs), Westat

<https://bit.ly/2LbGIHw>

2022 National Project Competition Winners

Each year, the Statistics Project Competition attracts a variety of reports detailing creative studies conducted by students in grades 7–12. The competition is especially useful for these students because it provides them with an opportunity to apply all the statistical skills they have acquired throughout the school year to solve real-world problems of interest to them. Results of the project competition, as well as a list of the judges, can be found at <http://magazine.amstat.org>.

Grades K-3

FIRST PLACE

Dr. Petrick's Third-Grade Class

3rd-Grade Gold-Medal Observations on the Olympics

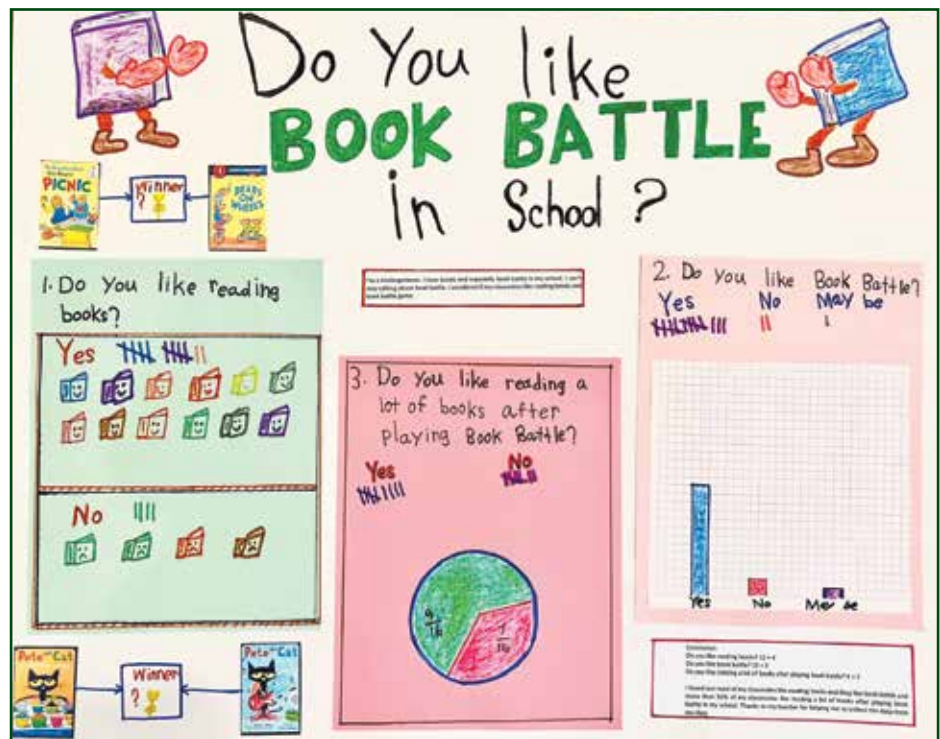
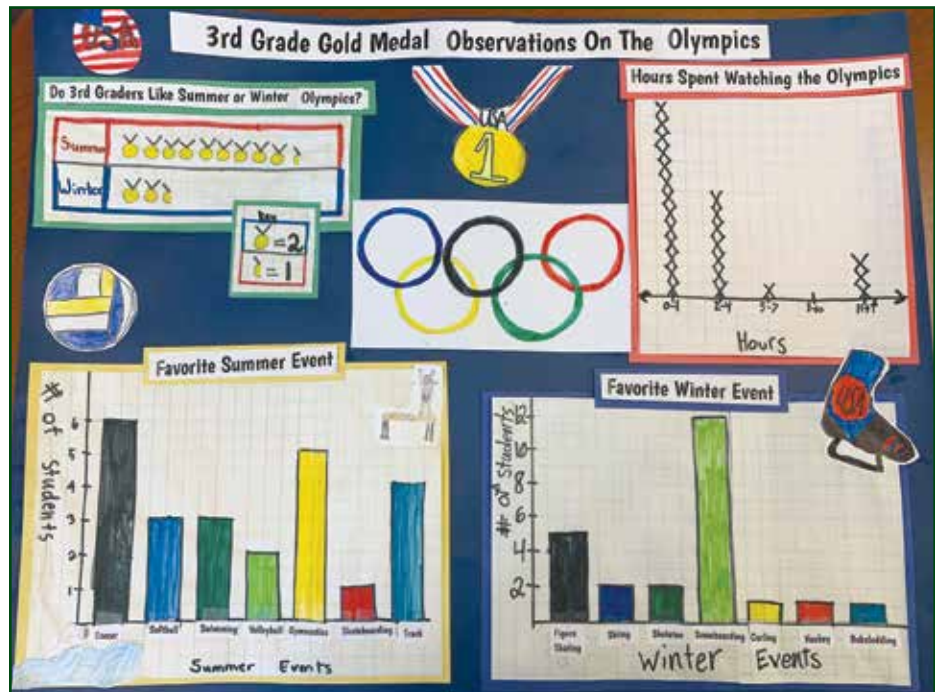
Timmons Elementary School
Chagrin Falls, Ohio

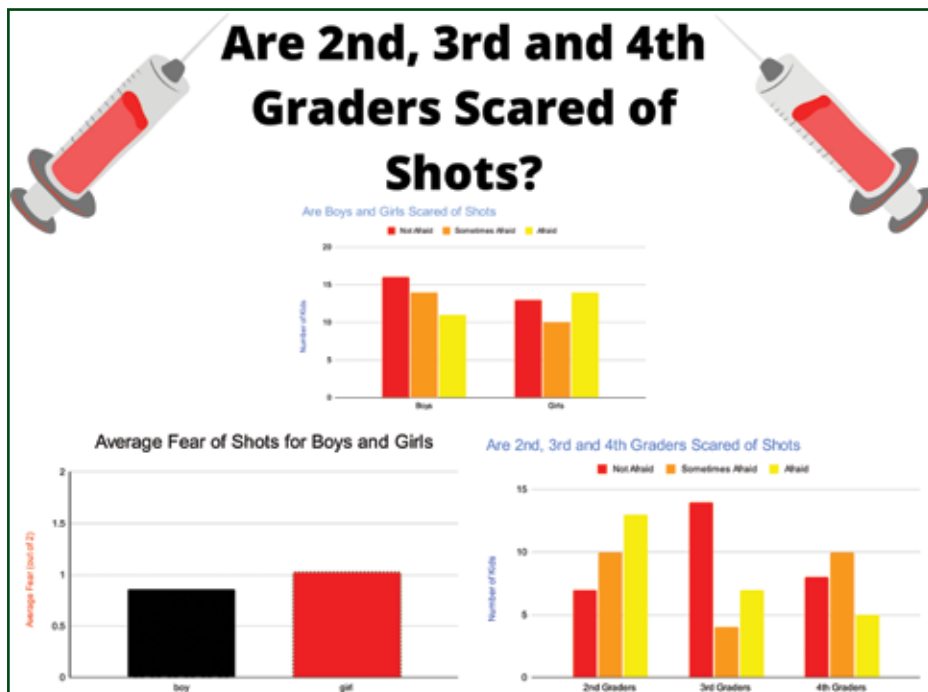
SECOND PLACE

Sana P. Kannan

Do You Like Book Battle in School?

Uriah H. Lawton
Elementary School
Ann Arbor, Michigan





THIRD PLACE

Naomi Tzingounis and Jayden Chen

Are 2nd, 3rd, and 4th Graders Scared of Shots?

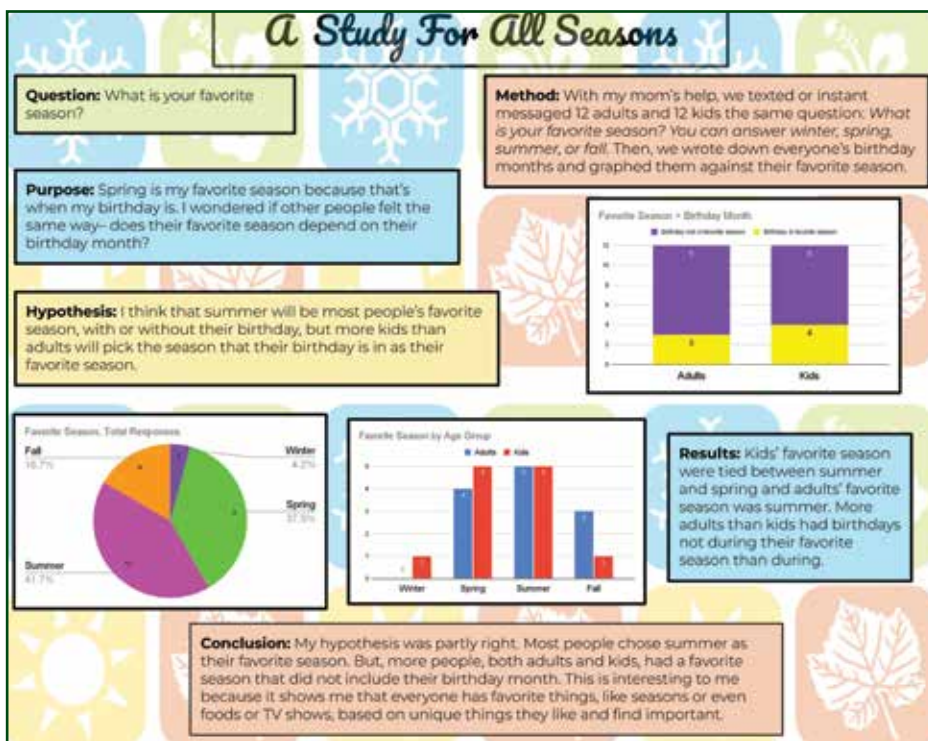
Dorothy C. Goodwin Elementary
Storrs, Connecticut

HONORABLE MENTION

Sadie Feeney

A Study for All Seasons

Rydal East Elementary School
Huntingdon Valley,
Pennsylvania



Grades 4-6

FIRST PLACE

Erin Park

Location of Quality Universities and Other Contributors to the University

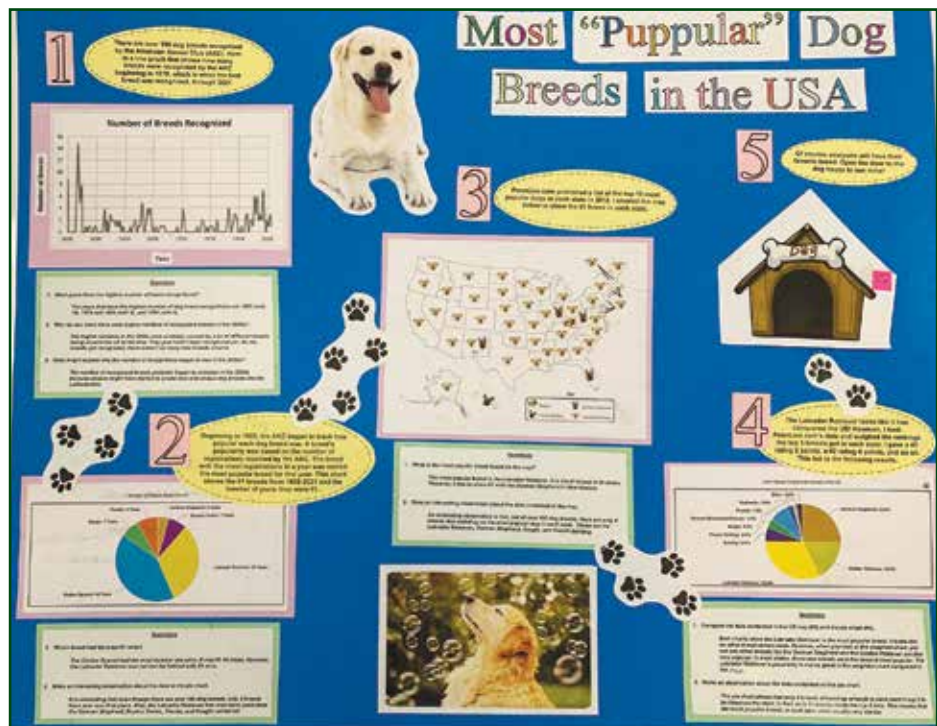
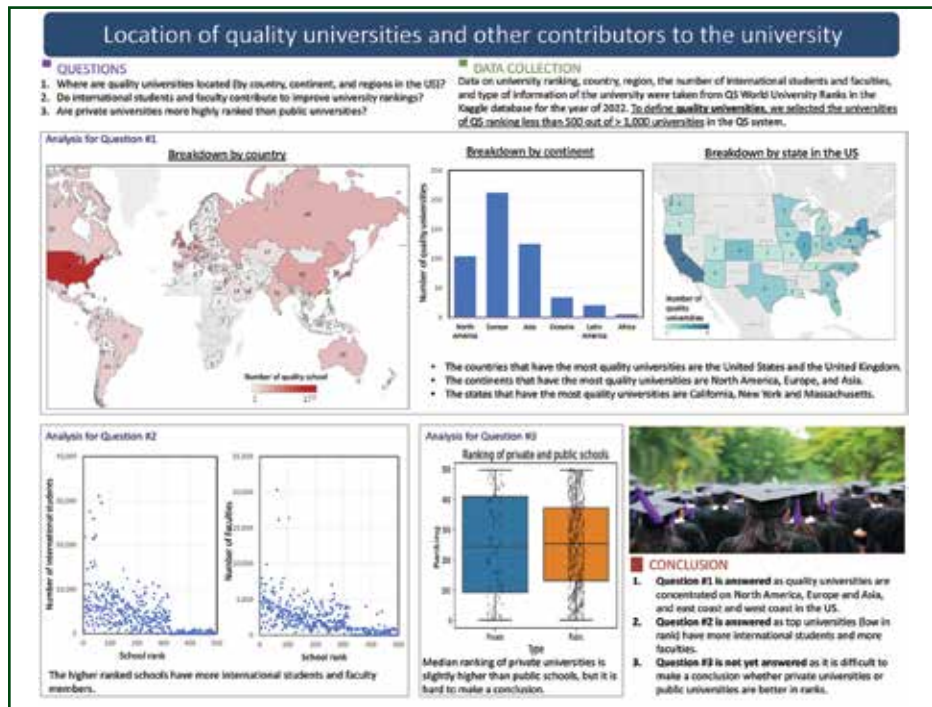
O'Hara Elementary School
Aspinwall, Pennsylvania

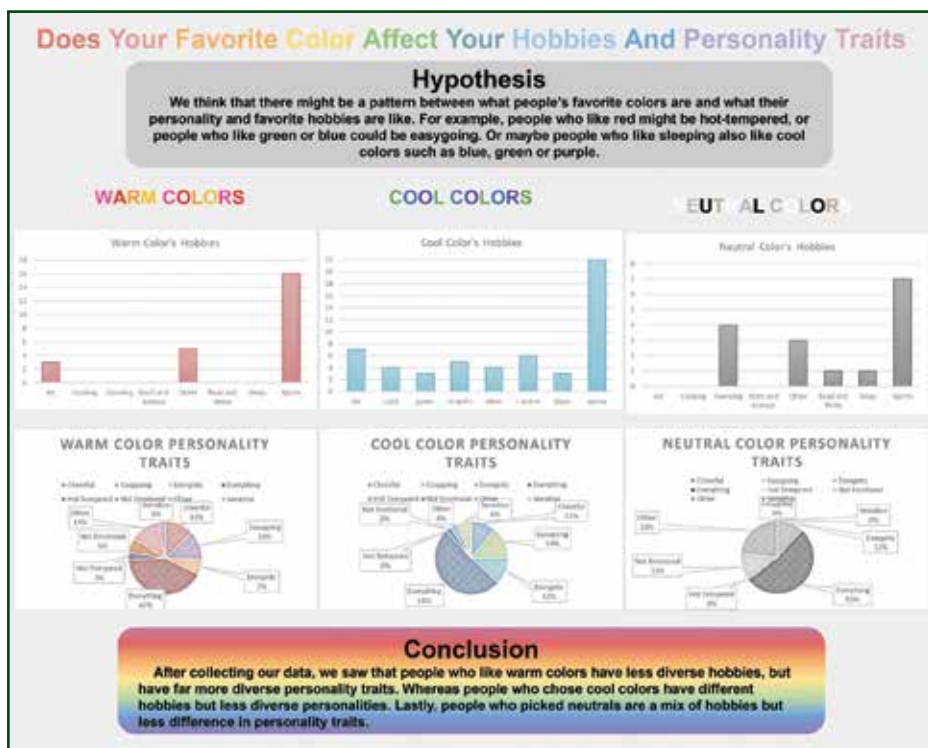
SECOND PLACE AND BEST OVERALL GRAPH

Remi Ella Maloney

Most 'Puppular' Dog Breeds in the USA

Lied STEM Academy
Las Vegas, Nevada





THIRD PLACE

Lilah Korsmo and Clare Petrov

Does Your Favorite Color Affect Your Hobbies and Personality?

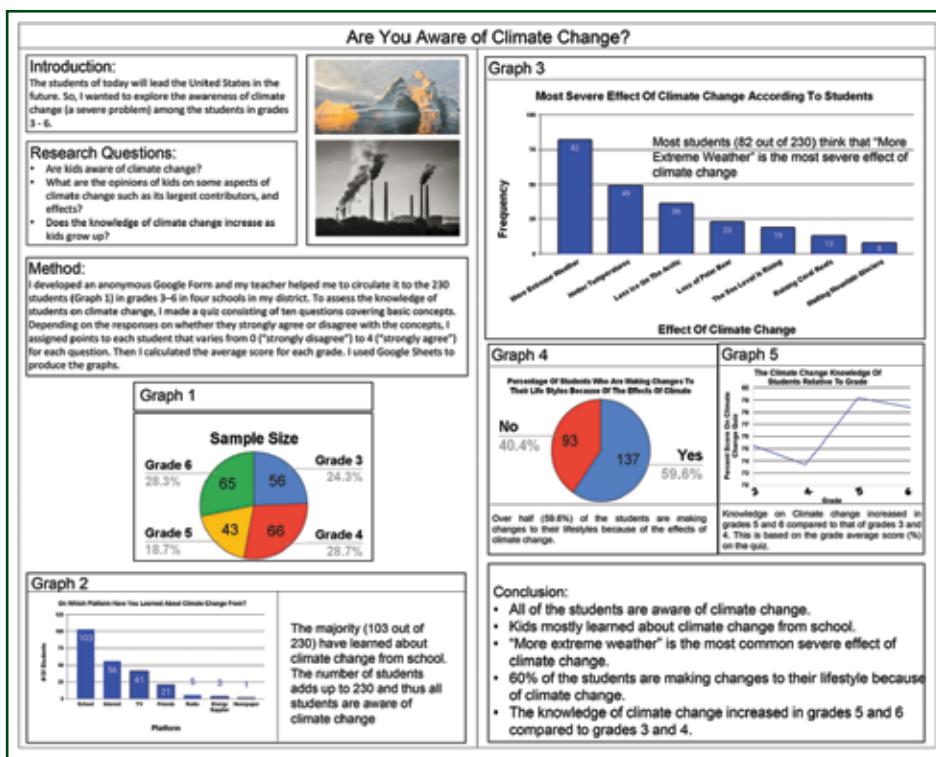
Hawken School
Gates Mills, Ohio

HONORABLE MENTION

Mubtasim Rafan

Are You Aware of Climate Change?

Mansfield Middle School
Storrs, Connecticut



Grades 7-9

FIRST PLACE

William Butler
and Parker Stusek

*How Do Students Portray
Themselves in
the Classroom?*

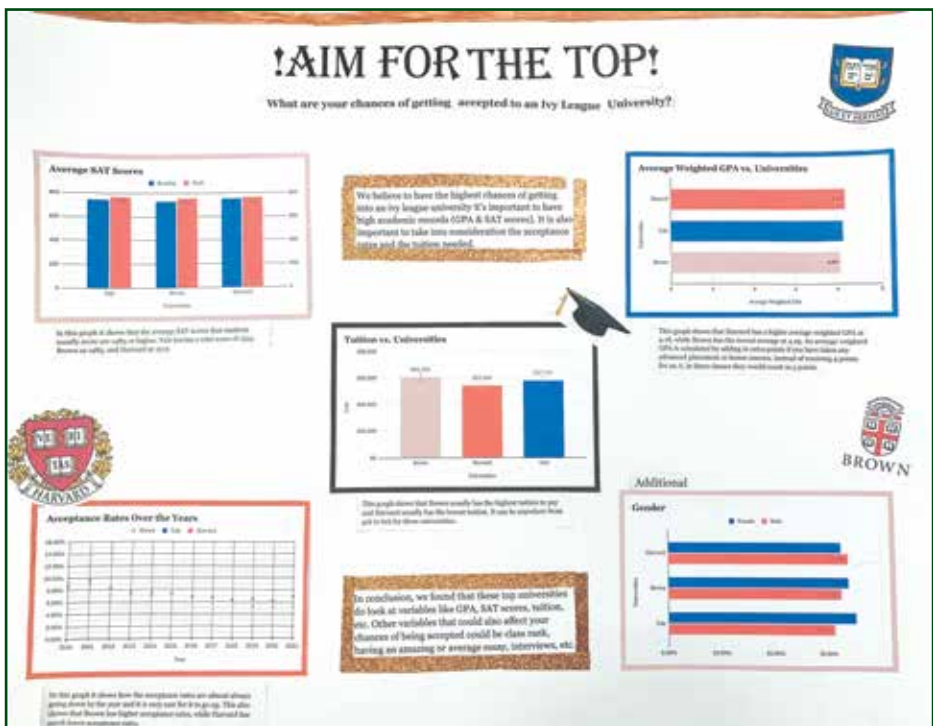
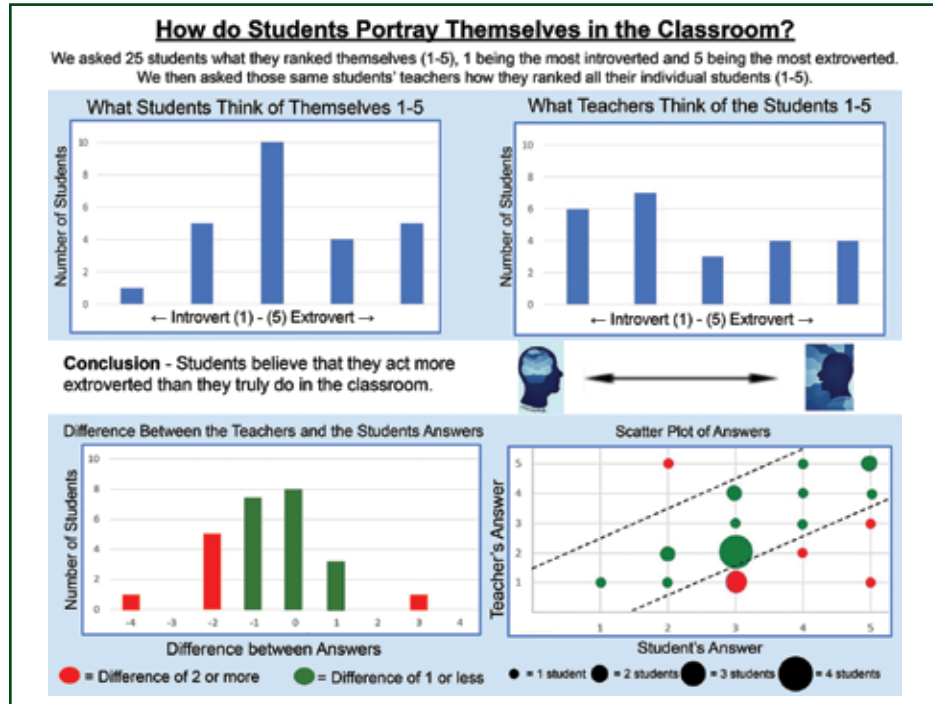
Hawken School
Gates Mills, Ohio

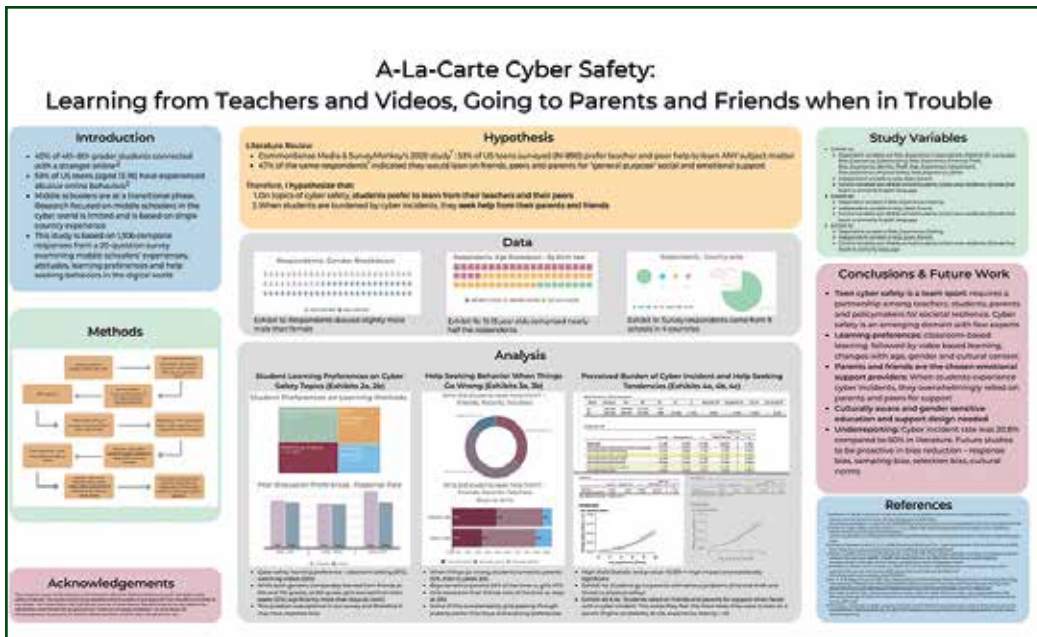
SECOND PLACE

Areli Martin Olivia
and Serra Icasa-Soto

Aim for the Top

Hyde Park Middle School
Las Vegas, Nevada





Grades 10-12

FIRST PLACE

Sumira Naroola, Joseph Chen, Jayden Cheung, and Samuel Jebaraj

Background: Financial Literacy & Global Economic Health

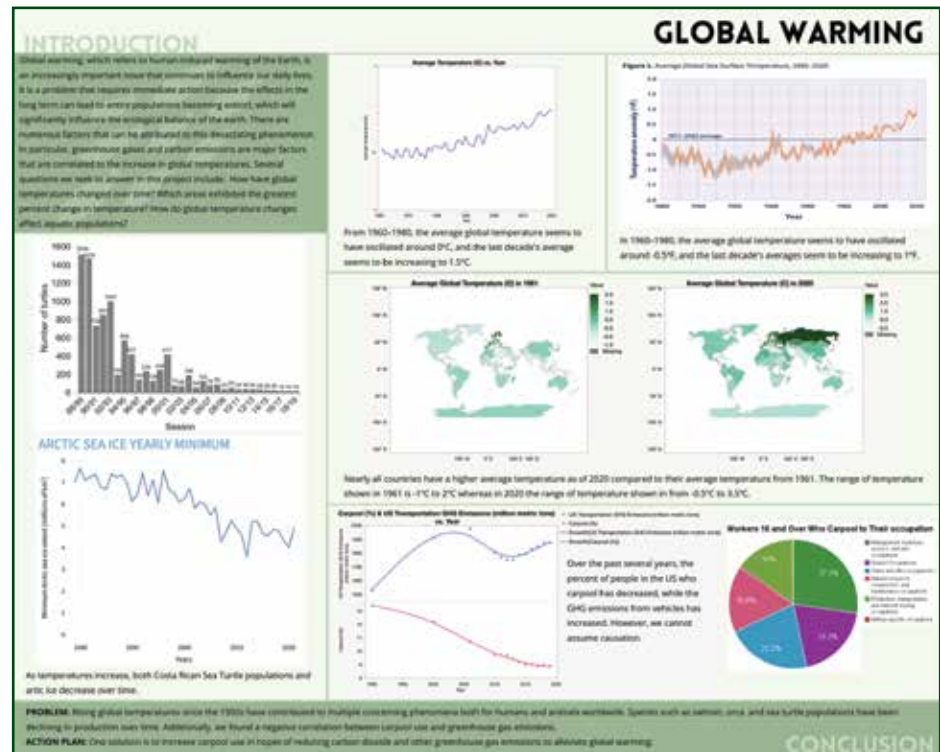
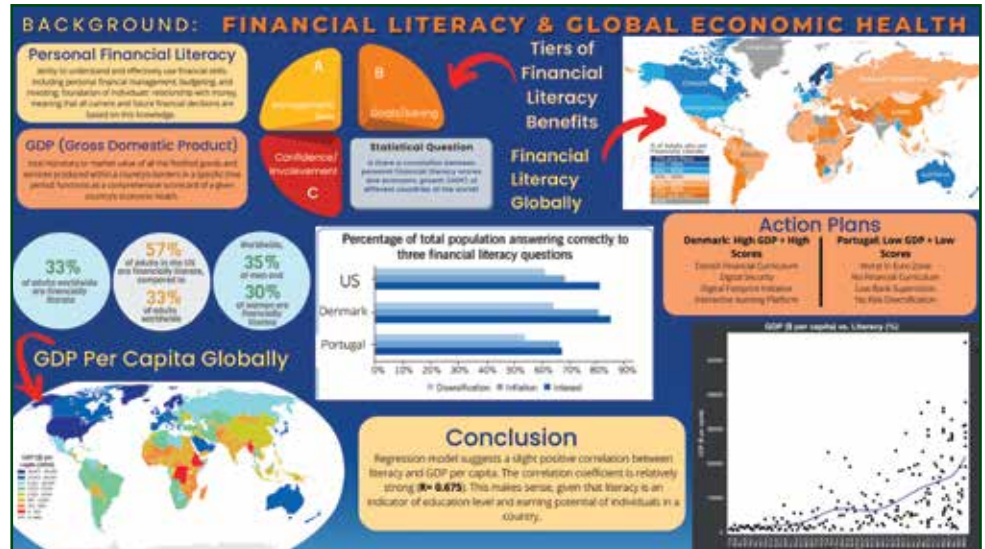
Valley Christian High School
San Jose, California

SECOND PLACE

Bhavya Yarlagadda, Sydney Lynch, Serena Pei, and Olivia Fang

Global Warming

Valley Christian High School
San Jose, California





THIRD PLACE

Theo Au-Yeung

Who Is the GOAT of European Soccer?

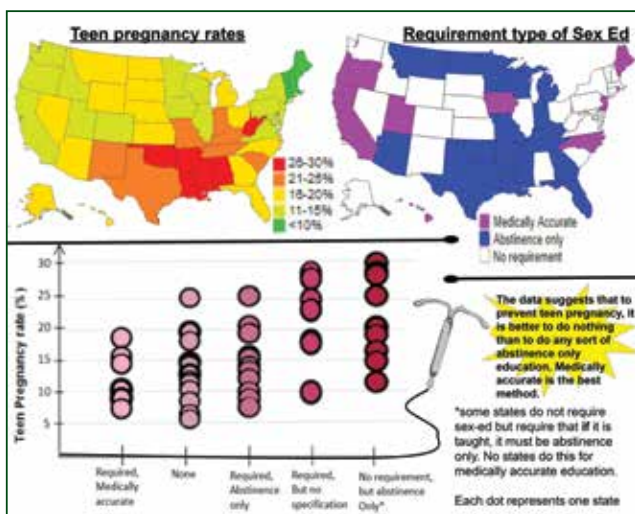
Burlingame High School
 Burlingame, California

HONORABLE MENTION

Amanda Lee

Teen Pregnancy and Sex Education

Hawken School
 Gates Mills, Ohio

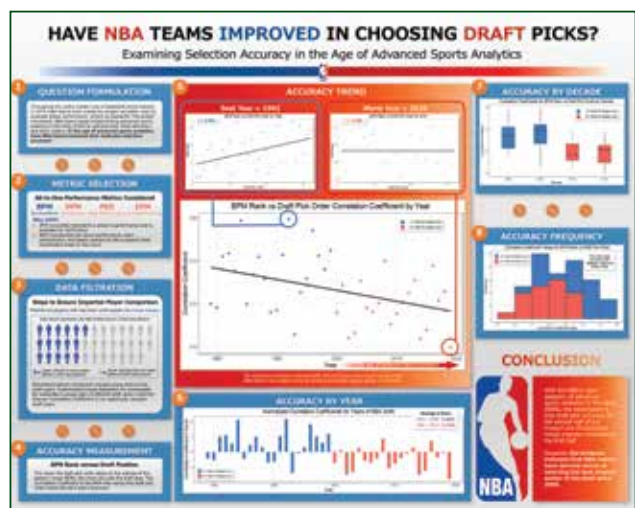


HONORABLE MENTION

James Roberts

Have NBA Teams Improved in Choosing Draft Picks?

Westlake High School
 Austin, Texas



First Rousseeuw Prize Awarded for Work on Causal Inference

The King Baudouin Foundation has awarded the newly established Rousseeuw Prize for Statistics, worth \$1 million, to **James Robins, Miguel Hernán, Thomas Richardson, Andrea Rotnitzky, and Eric Tchetgen** for their pioneering work on causal inference with applications in medicine and public health.

This biennial prize, established by Peter Rousseeuw—professor of statistics at KU Leuven—aims to reward excellence in statistical research that has a significant impact on everyday life.

Half the prize amount will go to Robins of Harvard University and half will be shared by Hernán of Harvard University, Richardson of the University of Washington, Rotnitzky of the Universidad Torcuato di Tella, Argentina, and Tchetgen of the University of Pennsylvania. The latter four laureates were either trained or deeply influenced by Robins and remain his principal collaborators.

Link Between Jellyfish Stings and Ice Cream

The team is recognized for pioneering research on causal inference with applications in medicine and public health. Causal inference is the process of determining causes and effects. This can be harder than it looks because several factors can occur together.

Take, for example, the number of jellyfish stings suffered on a given day. This tends to move in line with sales of ice cream. That is known as correlation: On the days with higher ice cream consumption, there tend to be more jellyfish stings. The number of jellyfish stings is also correlated with the air temperature, the number of people swimming in the sea, the use of air conditioning, and so on.

But these factors are not all causes of jellyfish stings, since eating an ice cream doesn't give you a jellyfish sting. Swimming in the sea can.

Revolution in Statistics

The laureates' work has provided new insights into and statistical methods for addressing central epidemiological questions. For example, what is the effect of a long-term medical treatment? And, if beneficial, what treatment strategies are optimal? Their work has, for instance, resulted in guidelines on when to best initiate antiretroviral therapy in people with HIV.

Causal questions like these are complex to address. Robins showed it was especially difficult to interpret data from studies that measured exposures or treatments repeatedly over time. This is because there can be feedback mechanisms.

In people with HIV, for instance, doctors start antiretroviral treatment in those whose immunity has been compromised by the virus. Therefore, patients who start antiretroviral treatment are, on average, sicker than patients who do not start treatment. This could give the erroneous impression that the treatment is harmful. Then, imagine the treatment does improve a patient's immune response. This results in a complex feedback system, where immunity affects the treatment the patient receives, which affects future immunity and thus future treatment.

Robins solved this methodological problem in a series of papers published in the 1980s. He thereby laid the foundation for a long line of methodological innovations by the other laureates, which has helped launch a causal revolution in statistics.

Impact from Epidemic on Economy

The laureates' work has had a huge influence on statistical practice in medicine and public health. It has also spread to fields such as economics and psychology. In a number of important cases, it has demonstrated that disparities between conclusions drawn from experimental and nonexperimental studies are due to the use of older statistical methods that were not suitable. Examples that have had both scientific and societal effects include studies of the following:

- Post-menopausal hormone therapy on coronary heart disease
- Statin therapy on cancer
- Benefits of anti-inflammatory therapy for COVID-19 patients

The work honored by the Rousseeuw Prize has completely transformed the way in which statisticians, epidemiologists, and others infer the effects of interventions, treatments, and exposures to potentially harmful substances. It has greatly improved the overall reliability of causal analysis in medicine and public health, with great benefit to society.

The prize will be awarded at a ceremony taking place at KU Leuven on October 12. ■

MORE ONLINE
To read more about the Rousseeuw Prize for Statistics, visit <https://rousseeuwprize.org>.

Two Awarded Ellis R. Ott Scholarships

Therese Azevedo and Ann Marie Weideman were recently awarded Ellis R. Ott scholarships for the 2022–2023 academic year.

Azevedo is a graduate of Sonoma State University, where she earned her Bachelor of Science in statistics and was committed to both leadership and research opportunities. Her leadership roles included being a learning community mentor, resident adviser, and mathematics/statistics tutor. She was involved in a variety of research projects that explored topics such as safety issues with micromobility transportation and the impact of STEM mentorship. She also had summer research experiences at both Purdue and Rutgers. Azevedo's research interests range from environmental science to social science, with an emphasis on computational statistics. Currently, she is a data fellow at the National Science Foundation Arctic Data Center. She will be attending Montana State University to pursue her Master of Science in statistics.

Weideman is pursuing a PhD in biostatistics at The University of North Carolina at Chapel Hill. She works as a predoctoral trainee on a cancer genomics training grant and a graduate research assistant with the Center for AIDS Research Biostatistics Core. Prior to matriculation, she conducted research on multiple sclerosis at the National Institutes of Health Clinical Center and



Therese Azevedo



Ann Marie Weideman

Ott Scholarship Governing Board Members

Lynne Hare, *Chair*

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J. Stuart Hunter

Tom Murphy

Marcus Perry

Robert Perry

Susan O. Schall

Ronald Snee

J. Richard Trout

Neil Ullman

Mark Vandeven

taught differential equations and statistics at a local engineering university. Weideman's research interests involve cancer genomics, high-performance computing, clinical trials, and infectious disease. She also enjoys

mentoring undergraduate students and creating opportunities for undergraduates to explore research in biostatistics.

Ellis R. Ott scholarships are awarded under the auspices of the Statistics Division of the American Society for Quality. Application information may be found on the division's website at <https://bit.ly/3Og6u9X>. ■

Ellis R. Ott scholarships are awarded under the auspices of the Statistics Division of the American Society for Quality.

Submitted and translated from French by Pascal Massart

Marc Hallin, professor emeritus at the Université libre de Bruxelles, was honored recently with the Pierre-Simon de Laplace Prize.

A worldwide prominent figure of mathematical statistics and a worthy continuator of Lucien Le Cam, Hallin made fundamental contributions to the optimality of rank-based tests, local asymptotic normality properties, multivariate quantiles, and, recently, the theory of measure transportation.

Hallin excels in explaining deep results to a broad-spectrum audience in an intelligible way without lapsing into caricature. A distinctive feature of his activity is his interdisciplinary curiosity and his ability to create links between various fields. His network of international collaborators is impressively wide and his impact on our discipline is considerable. His scientific generosity, which has been appreciated by generations of students, and his investment in the service to the statistical community in general—the Société française de Statistique in particular—are outstanding.

Hallin, above all, is the embodiment of a humanistic approach to science that never waned throughout his long career. ■

Raghib Ali was awarded an Order of the British Empire for services to the National Health Service and the COVID-19

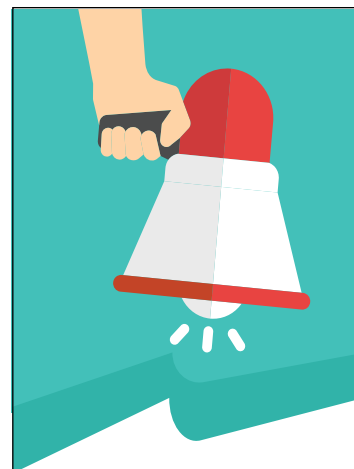
response for the platinum jubilee-year queen's birthday honors.

Ali is an honorary consultant in acute medicine at the Oxford University Hospitals NHS Trust and a senior clinical research associate in the MRC Epidemiology Unit at the University of Cambridge. Prior to becoming an associate fellow in 2020, he was a Doll Fellow at Green Templeton, working as part of the medical teaching program. In 2022, he was appointed chief medical officer of Our Future Health.

Raghib said, "I am delighted to have been recognized in the Queen's Birthday Honors for my clinical duties as a front-line NHS doctor at the John Radcliffe Hospital and my work helping us to understand the causes of the disproportionate impact of COVID-19 on ethnic minorities, reducing those disparities and improving vaccine uptake."

He continued, "I would never have imagined that one day I would be receiving such an award. As a child on free school meals attending one of the worst-performing primary schools in the country, my chances of becoming a doctor were almost zero and so I am very grateful for the opportunities I have had in my career to date and I hope this award will inspire children and young people across the country who find themselves in similarly difficult circumstances."

Read more about Ali's work and the award at <https://bit.ly/3Odb07P>. ■



How Can We Help?

We want to help you share your own news with colleagues and showcase your latest successes.

It is important to us that everyone knows about your research, recent awards, and promotions!

If you have any news you would like to share, email megan@amstat.org.

sectionnews



Biometrics

The Biometrics Section will sponsor the following events at JSM 2022:

Mixer

Come join us for our annual **Biometrics Section Mixer on Monday, August 8, from 5:30 p.m. to 7:30 p.m.** in the Monument room at the Marriott Marquis. We will announce this year's talented group of Student Paper Award winners and the Annie T. Randall Innovator Award recipient. Drop by to learn about the groundbreaking work from our young scholars. If anyone is interested in volunteering for the section or if you have suggestions for other section activities, we would love to hear from you.

Invited Sessions

- **Monday, August 8**
8:30 a.m. – 10:20 a.m.
Dealing with Error-Prone Electronic Health Record Data via Validation Sampling

Organizer(s): Bryan Shepherd, Vanderbilt University Medical Center
<https://bit.ly/3uQ7db2>

- **Tuesday, August 9**
10:30 a.m. – 12:20 p.m.
Novel Methods in Curve Registration for Functional Data
Organizer(s): Julia Wrobel, Colorado School of Public Health
<https://bit.ly/3uQTWZG>
- **Wednesday, August 10,**
10:30 a.m. – 12:20 p.m.
Advances in Statistical Methods for Wearable and Mobile Health Data Analysis
Organizer(s): Ekaterina Smirnova, Virginia Commonwealth University
<https://bit.ly/3uSp80P>

Check the JSM conference program at <https://bit.ly/3PvnMkx> for the most current dates and times. ■

Survey Research Methods

Proposals for JSM 2023 invited sessions are due in early September and proposals for topic-contributed sessions are due in early December.

Invited sessions include invited papers (2–6 presenters and/or discussants) and panels (3–6 panelists providing commentary about a single topic). Topic-contributed sessions include papers (five total speakers with 20 minutes each, with at least three presenters and no more than two discussants), panels (3–6 panelists providing commentary about a single topic), and posters (10–15 participants with posters addressing a common topic).

The proposal should include a session title, general description of the session, list of participants, and tentative talk titles.

If you are interested in organizing an invited or topic-contributed session, select a session topic and solicit potential speakers. Once you have a sufficient number of committed speakers, you can submit your proposal online at <https://bit.ly/3o8qdhg>. ■

Professional Opportunity listings may not exceed 65 words, plus equal opportunity information. The deadline for their receipt is the 20th of the month two months prior to when the ad is to be published (e.g., May 20 for the July issue). Ads will be published in the next available issue following receipt.

Listings are shown alphabetically by state, followed by international listings. Vacancy listings may include the institutional name and address or be identified by number, as desired.

Professional Opportunities vacancies also will be published on the ASA's website (www.amstat.org). Vacancy listings will appear on the website for the entire calendar month. Ads may not be placed for publication in the magazine only; all ads will be published both electronically and in print.

These listings and additional information about the 65-word ads can be found at ww2.amstat.org/ads.

Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual orientation.

Also, look for job ads on the ASA website at <https://jobs.amstat.org/jobseekers>.

Michigan

■ The University of Michigan Department of Biostatistics is seeking applicants for two open rank and two tenure-track faculty positions with flexible starting dates. Candidates must have a strong research background with a doctoral degree in biostatistics, statistics, genetics, data science, computer science, bioinformatics, or other related quantitative discipline, and a strong research interest in health data science.

For further details, visit: <https://bit.ly/3RPLEBm>

Applications from women and minorities are encouraged. EOE/AA. ■

Senior Quantitative Analyst

EverQuote, Inc, Cambridge, MA:

Analyze performance metrics to drive growth in traffic, revenue, & profit. Analyze large data sets for trend analysis, competitor analysis, market positioning analysis, & user behavior analysis.

Telecommuting from within US allowed. Min Reqs: BA in Econ, Finance, or a closely rel field. Special Reqs: Must have any level of dem knowledge through coursework of: 1) stat methods; 2) database structures; & 3) forecasting & predictive analytics.

Qualified applicants email resume to John Little, Recruiting Coordinator, EverQuote, Inc at jlittle@everquote.com w/ ref to Job Code: EQWW22.

Looking for a JOB?

Let the ASA help you realize your professional goals.

JobWeb—The ASA JobWeb is a targeted job database and résumé-posting service www.amstat.org/your-career/asa-jobweb

JSM Career Placement Service—A full-service recruiting facility held annually at JSM, with hundreds of statistical employers seeking qualified applicants www.amstat.org/your-career

ASA

Possibilities and Probabilities

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misc. products and services

UConn cover 4
Taylor & Francis.....centerfold

professional opportunities

EverQuote, Inc. p. 42
US Census Bureau p. 43

This month's Top 10 is the 'Top Ten **Signs Your Collaborator May Be Insane.**'



Wasserstein

Amstat News continues its hilarious offering by ASA Executive Director Ron Wasserstein. Each month, he will deliver a special Top 10—one that aired during a recent edition of the *Practical Significance* podcast.

10

Tells you their research must be awesome because no one has been able to reproduce it

09

Keeps pulling out Clorox wipes to try to clean their data

08

Makes ridiculous pirate impressions each time you mention R



07

Always puts scare quotes around the word "research"

06

Suggests applying for a grant to study the most effective dose of margaritas



05

Names their grad students Squidward, Sandy Cheeks, and other Sponge Bob characters

04

Listens to this podcast (wait, what?)



03

Cross stitches you a lab coat



02

Refers to you as a statistically significant other

#01

And the #01 sign your collaborator may be insane? They chose to work with you.



To listen to the *Practical Significance* podcast, visit <https://magazine.amstat.org/podcast-2>.



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Excellence in Statistical Science

October 14-16, 2022

<https://stats.org/events/stat60anniversary/>



2022 marks the 60th anniversary of the Department of Statistics at UConn. Founded in 1962, as one of the major statistics departments in New England, the department provides outstanding preparation for careers in academia, industry, or government. As of 2022, we have a core faculty of 22 members whose teaching and research expertise span virtually all major specializations in statistical science. The department has both national and international reputation in undergraduate and graduate education, research, and service to the profession. The department offers BA/BS in Statistics, BA/BS majors in Mathematics and Statistics, Masters in Statistics, Masters in Biostatistics, and Ph.D. in Statistics. At the 60th Anniversary Celebration of the Department, we are hosting a conference with the theme “Excellence in Statistical Science”.

Keynote Addresses

- Nancy Reid, University of Toronto
- David Blei, Columbia University

Makuch Lecture

- Clarice Weinberg, National Institute of Environmental Health Sciences

Distinguished Alumni Award

- Bani K. Mallick, Texas A&M University

Invited Sessions

- Two sessions with statisticians and data scientists
- Presentations on a wide variety of statistical and data science theory, methods and practice

Career Advice Panels

- Two career panels sharing their experience and tips on careers in statistics and data science
- Alumni panelists from academia, industry, and government sectors

Poster Session

- Posters by students showing frontier works of statistics and data science

Statistical Consulting Services

- Showcases of statistical consulting service at UConn by faculty, students, and clients

Student Awards Ceremony

- The annual department student awards presented in the closing ceremony by special guests

Social Events

- Alumni video greetings
- Banquet
- Game night and Adventure Park at Storrs, CT

Faculty Book Gallery

- Books by current faculty at https://stats.org/events/stat60anniversary/book_gallery.html

Registration

- Opens in mid-July, 2022

Donations

- Go to UConn Foundation and choose the “Statistics Department General” (with a note indicating the 60th celebration; gifts to other statistics department funds are welcome too)
- Request employer matching gifts through the Matching Gift Program

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