GOERGEN INSTITUTE
FOR DATA SCIENCE

Class of 2020 Celebrates Commencement Online

On May 15, the Goergen Institute for Data Science (GIDS) joined the University of Rochester community in an online celebration for the Class of 2020. Of the 55 data science undergraduates who received degrees, 26 received Latin honors (cum laude, magna cum laude, or summa cum laude), 35 graduated with departmental distinctions, and 9 were inducted into Phi Beta Kappa. The online commencement also conferred degrees to 41 master's students: 14 who completed their degrees in May and 27 who completed their degrees in December 2019. Congratulations to the Class of 2020!

Graduates at a Glance

Of the 55 data science undergraduates receiving degrees in 2020:
- 13 students (24 percent) received Bachelor of Arts (BA) degrees and 42 students (76 percent) received Bachelor of Science (BS) degrees.
- 34 students (62 percent) were male and 21 students (38 percent) were female.
- 35 students (64 percent) were dual majors and 2 students (4 percent) were triple majors, studying everything from applied mathematics and physics, to economics, digital media studies, and business.
- 20 students (36 percent) completed minors in fields such as philosophy, Japanese, and international relations.
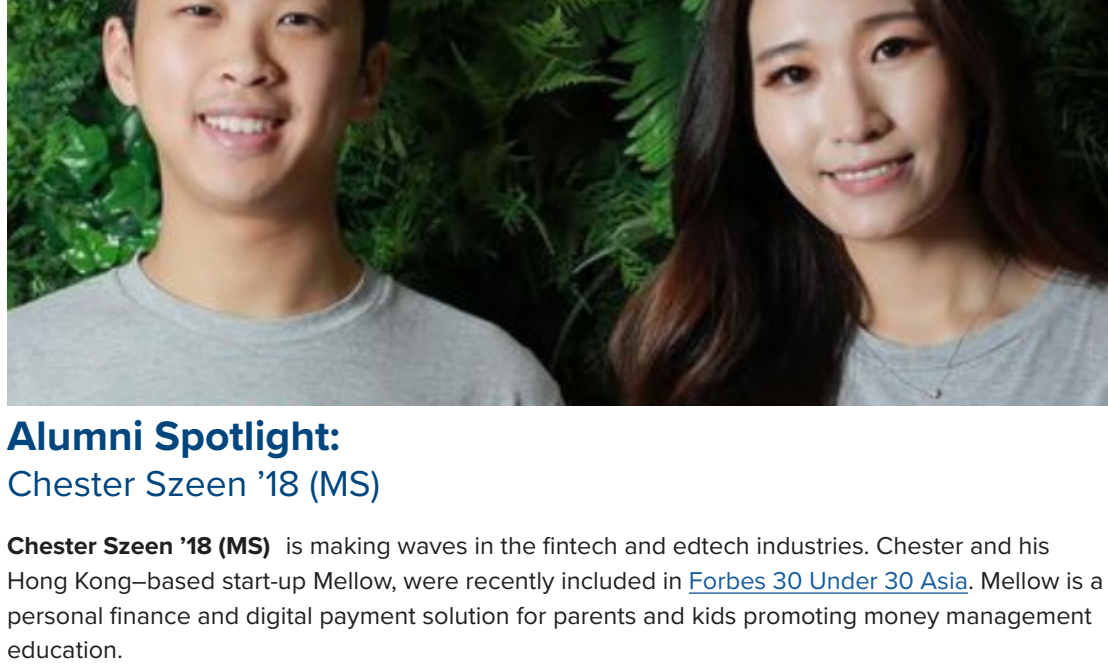
We could not be prouder of our data science graduates and their accomplishments!

Student Spotlight:
Luke Gerstner '20, John Polimeni '20, and James Zhan '20

In early March, data science undergrads Luke Gerstner '20, John Polimeni '20, and James Zhan '20 presented their work at the IEEE Integrated STEM Education Conference in Boston, Massachusetts. Their research paper, Measuring the Impact of Robotic Umpires, placed third in the conference's paper competition, ranking first for undergraduate research papers.

Alumni Spotlight:
Chester Szeen '18 (MS)

Chester Szeen '18 (MS) is making waves in the fintech and edtech industries. Chester and his Hong Kong–based start-up Mellow, were recently included in Forbes 30 Under 30 Asia. Mellow is a personal finance and digital payment solution for parents and kids promoting money management education.

Goergen Institute Expands Academic Programming

Earlier this year, the Goergen Institute for Data Science proudly launched a new graduate credential, the Advanced Certificate in Data Science program. Designed for individuals with working knowledge of data science, the certificate allows students to attain a deeper mastery of fundamental concepts in the data science field.

Students Gain Hands-on Experience through Data Science Capstone Projects

This spring, 52 students completed capstone projects, working in teams to conduct real-world data analytics. Over the course of the semester, students worked to understand business problems, clean and analyze the data, and devise data science–based solutions for sponsoring organizations. Spring 2020 sponsors included Kids Out and About, Rochester Museum & Science Center, City of Rochester, the University of Rochester College Center for Advising Services, Vnomics, URMC Geriatric Oncology, and Lake Ontario South Shore Engineering. For a list of recent capstone sponsors and projects, visit the Data Science Capstone website.
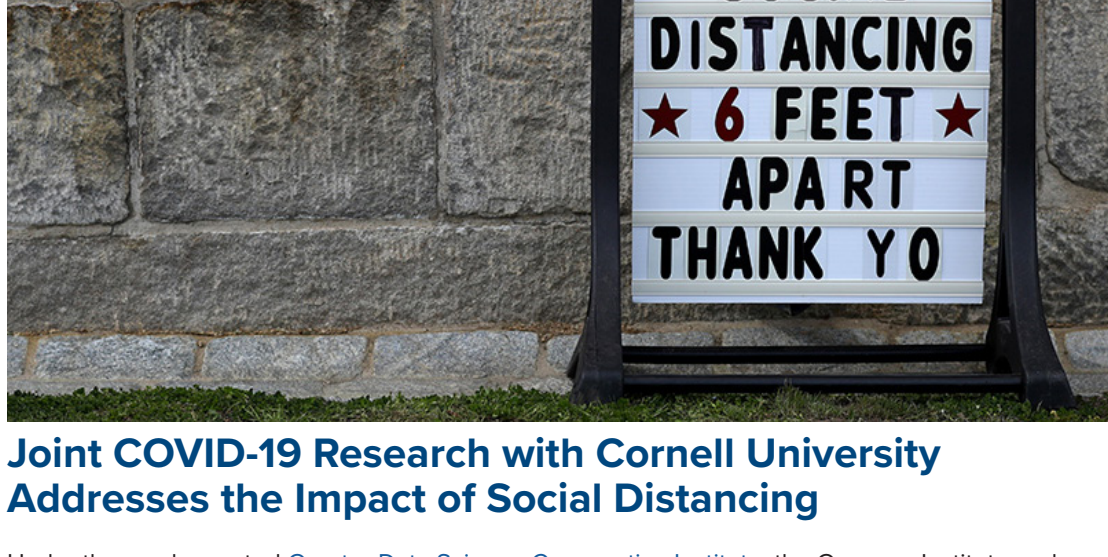
New Course: Introduction to Data Science

Beginning this summer, the Goergen Institute for Data Science will offer an Introduction to Data Science course online. The course provides a practical introduction to data science and explores concepts such as data-based reasoning, data analytics, and visualization. It also gives students the opportunity to apply their learning to real-world datasets drawn from a wide variety of subject areas.

Working Groups Bring University of Rochester Faculty Together

With the establishment of the Goergen Institute for Data Science working group, Director Mujdat Cetin has brought faculty from across the University of Rochester together, with the common goal of pursuing interdisciplinary data science research opportunities. "GIDS working groups facilitate collaborative research on data science, help to shape and update the strategic priority areas of the Goergen Institute, and build on the strengths of the University, while enabling clusters of faculty to initiate new research directions and collectively impact emerging research areas," says Director Cetin. The initial seven working groups focus on the following themes:

- foundations of machine learning and artificial intelligence
- imaging, optics, and computer/human vision
- life sciences and biomedical data science
- health analytics and digital health
- human-data-system interfaces
- complex systems and network data science
- economics and business data analytics

Joint COVID-19 Research with Cornell University Addresses the Impact of Social Distancing

Under the newly created Greater Data Science Cooperative Institute, the Goergen Institute and Cornell University gathered and analyzed COVID-19 case data to discern the impact of social distancing on the virus's spread. Researchers found that social distancing measures have merely stabilized the spread of coronavirus in the US, rather than reversing it.

Rochester Data Science Consortium Paper Addresses COVID-19 Reopening

Researchers at the Rochester Data Science Consortium (RDSC) have written a white paper outlining a data-driven approach to safely reopening businesses, identifying factors that mitigate the risk of COVID-19 transmission. Drawing on the U.S. Bureau of Labor Statistics (BLS's) Occupational Information Network (O*NET) surveys, RDSC researchers identified and ranked occupations and industries based on teleworking capabilities and risk of COVID-19 transmission.

Research Spotlight:
Gourab Ghoshal and Andrew White

Affiliated faculty members Gourab Ghoshal, associate professor of physics, mathematics, and computer science, and Andrew White, assistant professor of chemical engineering, recently received a National Science Foundation grant to create a mathematical model that will monitor the spread of COVID-19. They hope to create a unique tool that will help policymakers make informed decisions about reopening the country.

An Afternoon with Katie Bouman (Caltech)

On January 17, the Goergen Institute welcomed distinguished speaker Katie Bouman, assistant professor of computing and mathematical sciences at the California Institute of Technology (Caltech) to a packed Wegmans Hall auditorium. In her research talk, Capturing the First Picture of a Black Hole & Beyond, Katie discussed the methods and procedures used to produce the historic first image of a black hole.

At the Intersection of AI and Ethics

On May 1, the Goergen Institute and the Department of Philosophy jointly hosted Algorithmic, Ethics, Philosophy and Computer Science, a virtual workshop on the ethical implications of algorithmic decision-making. Featured speakers Annette Zimmerman (Princeton University), Kate Vredenburgh (Stanford University), Phebe Vayanos (University of Southern California), and Jonathan Herington (University of Rochester) brought philosophical discussions of justice, fairness, and accountability into conversations about technical computer science literature. Video recordings of the workshop are available here.

Faculty Awards and Recognition

Former Goergen Institute Interim Director and Data Science Fellow H. Ehsan Hoque was named an emerging leader by the National Academy of Medicine.

The Association for Clinical and Translational Science (ACTS) named faculty member Scott Steele to its Board of Directors.

Affiliated faculty member Jiebo Luo was appointed Editor-in-Chief (EiC) of the IEEE Transactions on Multimedia (T-MM).

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