



Economics

UNIVERSITY OF TORONTO

# First Annual **TECH-ECONFERENCE** at U of T

# 2021



# ORDER OF EVENTS

Friday, April 30, 2021 • 9:00–11:15 a.m.

- 9:00

**Introductory Remarks**  
Professors Robert Gazzale and Nazanin Khazra
- 9:15  
to  
10:45

**10-Minute Presentations: See program for details**  
1. Maria Lin  
2. Sam I Cheong  
3. Ankhee Paul  
4. Isabella Giancola-Schieda  
5. Albert Zhu  
6. Gabrielle Carelli Yamamoto  
7. Aditi Khetwal  
8. Faisal Alkhalili  
9. Derek Thiele
- 10:45

**Q & A Session**
- 11:00

**Presentation of Awards**  
Professor Ettore Damiano, Department Chair
- 11:15

**Program concludes**

# WELCOME



**ROBERT GAZZALE**

Associate Professor, Associate Chair  
Undergraduate Studies



**NAZANIN KHAZRA**

Assistant Professor, Teaching Stream  
Instructor, Data Tools for Economists

We are thrilled to welcome you to the first annual “Tech-Econference at U of T” and honoured to be able to provide this platform for our undergraduates to present—and show off—research they have completed this past academic year.

In a world awash with data, it is difficult to believe that it was only a few years ago that the researcher’s problem was trying to make inferences from a limited amount of data. Now, academia and industry increasingly demand big-data skills such as working with satellite data, generating and scraping data, visualizing data, and applying machine learning methods to economic questions. The purpose of this conference is to showcase and celebrate undergraduate research that uses these cutting-edge “tech tools” to answer important economic questions—and to allow these budding researchers to engage in a little healthy competition!

Ideally, an undergraduate’s path is marked by the transition from the consumption of knowledge to its production. Understanding the current state of knowledge and mastering knowledge-generating tools are certainly necessary. At least as important are the confidence and courage a student needs to join the knowledge-creation conversation. We applaud all of the students who applied to this conference for having taken the step. The projects in this conference were selected from an already impressive set of applicants. We promise that you won’t need to listen long in order to learn something new.

Again, please join us in congratulating this impressive group of scholars!



## WHAT ARE THE KEY DETERMINANTS OF SHORT-TERM RENTAL PRICES? EVIDENCE FROM AIRBNB



### Maria Lin

Finance and Economics with a Focus in  
Data Analytics Specialist  
(Third Year)

#### MARIA SAYS...

*The Data Tools course provided a solid foundation and familiarity with the tools used in data analysis and got me interested in the relationship between theory and empirical study. In the future, I hope to take these skills and apply them to make me more effective in my career.*

## ROLE OF LOCATION, AGE, AND POPULATION DENSITY IN CALIFORNIA HOUSING PRICES



### Sam I Cheong

Economics with a Focus in  
Data Analytics Major,  
Statistics Major  
(Fourth Year)

#### SAM SAYS...

*I have learned in the Data Tools course the skills of data analysis such as data visualization, web scraping and machine learning. This course has not only provided me with an opportunity to conduct research using data analytics skills but also let me think about my future career as a data analyst. I have developed a strong interest in data analysis and want to learn more about it in my future studies. I will take the course in machine learning to get deeper into the world of data.*



## WHAT ARE THE POTENTIAL LOCAL VARIABLES THAT CAN PREDICT COVID-19 CASES?



### Ankhee Paul

Economics with a Focus in  
Data Analytics Major, Statistics Major  
(Third Year)

#### ANKHEE SAYS...

*I'm really interested in working with data; exploring and analyzing to discover the kind of story the data tells. Through the Data Tools course, I learnt how to use programming to display data and its story better using various visualization techniques. I discovered that the use of programming can be extended to conduct economic analysis. The course also helped me use economic reasoning to understand the results drawn from the data and present it in the form of a cohesive academic paper. The skills I developed in this course are relevant in shaping my interest in working with datasets, conducting economic analysis and writing academic papers in the future.*

## CONTAGIOUS: INVESTIGATING THE ROLE OF COVID-19 IN THE 2020 UNITED STATES PRESIDENTIAL ELECTION



### Isabella Giancola-Schieda

Economics with a Focus in  
Data Analytics Specialist  
(Third Year)

#### ISABELLA SAYS...

*Taking the Data Tools course has equipped me with heightened technical skills and an increased fascination with the ways data from unique sources can be used for cutting-edge research. I worked with satellite, text, and web-scraped data, and I was elated at the opportunity to create an original research project, entirely of my own design. After undergrad, I plan to pursue my PhD in Economics where I will continue to explore the connections between economics and computer science.*



## CAN LOCAL (IN-STATE) TWEETS PREDICT ELECTION SUCCESS?



### Albert Zhu

Economics Major, Statistics Major,  
History Minor  
(Third Year)

#### ALBERT SAYS...

*As it is a new addition to the U of T catalogue, the Data Tools course was initially unfamiliar to me. I had taken it simply as a course requirement and did not expect anything special. I found that this course was especially hands-on among the many other courses I had taken. Yes, many other courses can teach you how to run regressions, project trends, or the underlying statistical mathematicss, but what Data Tools excelled in was practical work—scraping data from the web, using APIs, and much else. While I am not entirely sure I will use all the techniques I learned in this course, I certainly feel more comfortable dealing with real-world data after this experience.*

## IS MOBILITY DERIVING THE TOTAL NUMBER OF DEATHS IN THE UNITED STATES?



### Gabrielle Carelli Yamamoto

Economics Specialist, Statistics Minor  
(Fourth Year)

#### GABRIELLE SAYS...

*In the Data Tools for Economists course, I learned about different data sources available for research, such as satellite data and web-scraping. It has inspired me to consider pursuing a data analytics graduate program in the future.*



## RACE, INCOME, AND STANDARDIZED TEST SCORES: EVIDENCE FROM SCHOOLS IN NEW YORK CITY



### Aditi Khetwal

Actuarial Science Major,  
Economics Minor, Statistics Minor  
(Third Year)

*Aditi is interested in the economics of education, and chose to research evidence from New York City schools relating to the effect of race and income on standardized test scores.*

## WHAT IS THE RELATIONSHIP BETWEEN CO2 EMISSIONS AND RISING GLOBAL LAND TEMPERATURES?



### Faisal Alkhalili

Economics with a Focus in  
Data Analytics Major,  
Philosophy Major  
(Third Year)

#### FAISAL SAYS...

*I am passionate about investigating the ethical and philosophical implications of collecting, analyzing, and using data. This Data Tools course has taught me about the endless positive effects of responsible data analysis while also equipping me with the tools and skills to pursue this passion.*

*My work in the course this semester has introduced me to the world of economic research that I hope to explore further following my undergraduate education. I've also learned to appreciate the tireless work that researchers around the world are committed to, as well as the innovative research and data analysis techniques that are being introduced to the world of economics.*



## A COMPREHENSIVE PICTURE OF WHAT HAPPENED IN THE 2020 U.S. PRESIDENTIAL ELECTION



### Derek Thiele

Economics Major with a Focus in  
Data Analytics,  
Public Policy Major  
(Third Year)

#### DEREK SAYS...

*The Data Tools for Economists course has given me an amazing opportunity to advance my research, data analysis, and communication skills by taking a comprehensive, hands-on approach where we get to dive in with Python and do economic research and analysis with real-world data. The professor and TAs were extremely helpful and gave great feedback on our work. I have learned so many new technical skills through this course and it has cemented my love for using Python for data analysis. It has inspired me to do a focus in data analytics as part of my economics major, and to pursue a career related to data and econometrics.*

CONGRATULATIONS  
TO ALL OUR PARTICIPANTS!