

# JACK COLLISON

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PO Box 12680 531 Lasuen Mall, Stanford, CA 94309

## EDUCATION

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### Stanford University

Stanford, CA

Master of Science in Statistics (3.9/4.0)

Expected April 2021

*Relevant Coursework:* probability theory, statistical inference, stochastic processes, time series, applied statistics, statistical learning, machine learning, causal inference

### Stanford University

Stanford, CA

Bachelor of Arts in Economics with Honors (3.8/4.0)

June 2020

*Honors Thesis:* “The Impact of Online Food Delivery Services on Restaurant Sales”

*Advisor:* Liran Einav

*Relevant Coursework:* microeconomics, macroeconomics, econometrics, market design, programming abstractions, multivariable calculus, linear algebra, matrix theory, real analysis

## GRANTS AND AWARDS

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Anna Laura Myers Prize for Outstanding Honors Thesis

Stanford University, 2020

Economics Departmental Honors

Stanford University, 2020

Department of Economics Summer Research Grant

Stanford University, 2018

National Merit Finalist

College Board, 2016

AP Scholar with Distinction

College Board, 2016

International Science and Engineering Fair Finalist

Intel, 2015

International Science and Engineering Fair Finalist

Intel, 2014

## PUBLISHED AND FORTHCOMING PAPERS

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1. “A survey of southern hemisphere meteor showers,” with Peter Jenniskens, et al. *Journal of Planetary and Space Science*, 154, May 2018, 21-29.
2. “Artificial Intelligence Techniques applied to Automating Meteor Validation and Trajectory Quality Control to Direct the Search for Long Period Comets,” with Marcelo De Cicco, et al. *Proceedings of the International Meteor Conference*, September 2017.
3. “Searching for Long-Period Comets with Deep Learning Tools,” with Susana Zoghbi, et al. *Neural Information Processing Systems: Deep Learning for Physical Sciences*, December 2017.

## PAPERS UNDER REVIEW

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1. “The Impact of Online Food Delivery Services on Restaurant Sales.”
2. “Trends in Hospital Prices for the Publicly and Privately Insured, 2009-15,” with Toren Frons-dal.

## RESEARCH EXPERIENCE

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**Stanford University Department of Economics**  
Independent Researcher

May 2019 - Current  
Stanford, CA

Conduct economics research using big data. Quantified crowding-out effects induced by online food delivery services and examined differential trends in hospital prices. Current interests include competition in e-commerce and mergers in insurance markets.

**Stanford Institute for Economic Policy Research**  
Research Assistant

October 2017 - May 2019  
Stanford, CA

Analyzed credit card data from Visa Inc. on the universe of retail outlets in the U.S. accepting Visa credit and debit cards. Developed a comprehensive dataset on retail establishment location, entry, exit and card transactions for understanding offline and online competition and growth.

## EXPERIENCE

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**Ellington Management Group**  
Research Analyst Intern

September 2020 - December 2020  
Greenwich, CT (*Remote*)

Projects include creating new models to assess risk with various optimization techniques and modifying existing models for better performance.

**QuantCo**  
Quantitative Research Intern

June 2020 - September 2020  
Berlin, Germany (*Remote*)

Responsibilities included developing and implementing algorithms to drive important business decisions. Projects included identification of harmful drug interactions and construction of a novel deep learning framework for surgical prediction.

**Stanford University Department of Statistics**  
Statistics Grader

April 2020 - June 2020  
Stanford, CA (*Remote*)

Responsible for grading problem sets for about 200 undergraduate students in an introductory statistics course.

**Ellington Management Group**  
Research Analyst Intern

June 2019 - September 2019  
Greenwich, CT

Analyzed large datasets, formulated statistical models, and assisted in executing trades with ad hoc analysis. Responsible for the creation of new datasets and statistical models on opaque products and markets.

**NASA Frontier Development Lab**  
Research Intern

June 2017 - August 2017  
Mountain View, CA

Automated the process of tracking and analyzing meteor showers associated with long period comets. Deep learning was used for false positive discrimination. Additionally, wrote a policy brief to NASA Headquarters on investment in artificial intelligence techniques.

## LEADERSHIP

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**Stanford Statistics for Social Good**  
Co-Chair, Researcher

February 2017 - Current  
Stanford, CA

Chair of working research group of graduate students that analyzes complex social problems. Responsibilities include organizing panels, events, projects, and meetings, as well as conducting statistical analysis.

**Stanford Code the Change**  
Web Developer

September 2016 - June 2017  
Stanford, CA

Helped design and create a website for CultureMesh, a nonprofit social networking platform that connects refugees.

## SKILLS

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**Programming:** Python, R, SQL, Excel, Stata, CSS, HTML, C++, Java, Javascript

**Languages:** English (native), Spanish (intermediate), Mandarin (elementary)