Jack Collison

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EDUCATION

Stanford University   **Stanford, California**   **June 2020**
Major: Economics
Minors: Statistics

EXPERIENCE

Stanford Summer Undergraduate Research Assistant Program in Economics and Public Policy, 2018
- Research Assistant to Dr. Pete Klenow and Dr. Liran Einav, BPO to Visa Global Data Science
- Scraped millions of Yelp sites to validate Visa dataset, and conducting statistical analysis on validated data
- Compose weekly written reports on research progress

Stanford Institute for Economic Policy Research, 2017 - Current
- Analyzing data from Visa Inc. on the universe of retail outlets in the U.S. accepting Visa credit and debit cards
- Developing a comprehensive dataset on retail establishment location, entry, exit and card transactions for understanding offline and online competition and growth; BPO to Visa Global Data Science
- Tools include data cleaning and merging, web scraping, and machine learning

NASA Frontier Development Lab, 2017
- Designed Python scripts to collect submitted data, run CAMS (meteor shower survey) software, and compare calculated orbit with a meteor shower template file based on annotated showers
- Machine learning used to identify outbursts of meteors and discriminate between meteors and false positives
- Work presented at NASA, International Meteor Conference; policy paper submitted to NASA

PROJECTS & CAMPUS INVOLVEMENT

Phenotyping Alzheimer's with the Electronic Health Records, 2018 - Current
- The cause of Alzheimer's disease is poorly understood, as are the disease subtypes
- What risk factors for Alzheimer's and its sequelae are recorded in the electronic health records?
- Using Foundation for Precision Medicine (FPM) Electronic Health Record (EHR) data, this work seeks to better characterize Alzheimer's disease subtypes using unsupervised machine learning methods

Stanford University Statistics for Social Good, 2017 - Current
- Connect with non-profits, government agencies, social advocacy groups, etc. to identify concrete social problems that can benefit from improved data analysis in the form of computational statistics
- Organize meetings and conferences in which data scientists and statisticians can present their projects

Stanford Code the Change, 2016 - 2017
- Created a Facebook Free Basics website for a non-profit, Culturemesh
- Developed the front end web design, using tools including HTML and CSS

Intel ISEF, 2013 - 2015
- Cancer and lymph node research based on healthcare data (mammograms and ultrasounds) from a local hospital
- Statistical analysis showed that breast density is an independent risk factor in breast cancer, and lymph node character can improve sensitivity and accuracy of diagnosis of breast cancer
- Presented at Intel International Science and Engineering Fair, 2014; continuation of research presented in 2015

SKILLS

Programming and Statistical Analysis: Python, R, Microsoft Excel, Stata, CSS, HTML, C++, Java, Javascript, SQL
Languages: English, Spanish, Chinese (Mandarin)

PUBLICATIONS

Jenniskens et. al. *A survey of southern hemisphere meteor showers* (Journal of Planetary and Space Science)