

# Hubert Luo

hubertluo@berkeley.edu | hluo27.github.io

## EDUCATION

---

University of California, Berkeley

May 2020

B.A. Statistics, Applied Mathematics (Specialization: Data Science)

GPA: 3.96, Dean's Honours List

Coursework: Machine Learning, Linear Modelling, AI, Stochastic Processes, Sampling, Experiment Design, Real/Numerical Analysis

## TECHNICAL SKILLS

---

- **Programming Languages:** Python (sklearn, tensorflow, numpy, pandas, re), R (caret, dplyr, ggplot), MATLAB
- **Data Analytics Tools:** Tableau, Jupyter Notebook, Bash, LaTeX, Git, Excel, Markdown, Qualtrics

## PROFESSIONAL EXPERIENCE

---

WellDone International (Non-Profit)

June 2018 – October 2018

Data Science Intern

San Francisco, CA

- Implemented random forest machine learning model to classify wells by their failure status with 78.5% accuracy
- Improved predictions with alternative data sources; created 30-page report on methodology/findings for aid organizations

Stark Research Group

September 2018 – Present

Undergraduate Researcher, Look Who's Talking Project

Berkeley, CA

- Review video-recorded faculty job talks to transcribe the number, nature, and duration of interruptions and questions
- Perform statistical analysis to quantify interruptions and test whether race and gender matter; help draft paper for publication

UC Berkeley Family and Culture Lab

January 2017 – May 2018

Undergraduate Researcher, Kids and Family Project

Berkeley, CA

- Design database and analyze longitudinal study data on risk and protective factors that impact childhood development
- Distribute, process, and evaluate 258 surveys using Qualtrics and Excel; lead Qualtrics team in online survey distribution

Berkeley Statistics Students Association

September 2017 – December 2017

Data Consultant, Alameda County Food Bank Project

Berkeley, CA

- Analyzed datasets to identify areas in need of hunger alleviation services; created model to predict pounds unmet by census tract
- Created data visualizations, wrote report, and created slides to communicate findings and develop distribution strategies

Ivy Global (Educational Consulting)

June 2016 – August 2016

Math Content Development Intern

Toronto, ON

- Created 120 math practice test questions and answer explanations and uploaded 200 answer explanations online using LaTeX
- Developed company-wide LaTeX guide to boost consistency in coding style, save time when debugging, and streamline training

## PROJECTS

---

- **BrokenBat Baseball Simulator Draft Analysis:** Scraped player and team information; developed and evaluated machine learning models to predict a player's potential; analyzed draft patterns in 15 seasons and created report of actionable findings
- **Neural Networks:** Built neural networks from scratch to implement handwritten digit classification, language classification, and regression models; achieved 97.5% accuracy on digit classification and loss of 0.0077 on sine curve regression
- **Classifying Legendary Pokémon:** Developed classifier to predict legendary status of a Pokémon with 98.8% accuracy using nearest neighbours algorithm
- **Location of Palindromes in DNA Sequence of Human Cytomegalovirus:** Tested goodness-of-fit of palindrome locations with model; wrote report with visualizations and tables to discuss results

## LEADERSHIP & TEACHING EXPERIENCE

---

Berkeley Model United Nations

September 2016 – Present

Director of Organizational Partnerships

Berkeley, CA

- Negotiate deals to provide \$5,000 discounts; moderate debate between 400 delegates to boost understanding of world issues

UC Berkeley – Data Science Department

January 2017 – December 2018

Group Tutor, Data 8: Foundations of Data Science

Berkeley, CA

- Lead review sessions, grade homework assignments, create tutoring worksheets, and hold office hours to reinforce key concepts

Associated Students of the University of California (Student Government)

August 2016 – May 2017

International Affairs Coordinator

Berkeley, CA

- Coordinated Visa and Career Planning Workshop for 100 students and cultural exchange events with 300 attendees

Interests: Karate (2<sup>nd</sup> Degree Black Belt), hockey, swimming, 20<sup>th</sup> century history, international affairs, piano (Associate of the Royal Conservatory of Music)