# Hubert Luo

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## EDUCATION

**University of California, Berkeley** **May 2020**
B.A. Statistics, Pure Mathematics **GPA: 3.96**, Dean's Honours List
*Coursework:* Machine Learning, AI, Data Science, Stochastic Processes, Linear/Abstract Algebra, Computing, Real/Numerical Analysis

## TECHNICAL SKILLS

- **Programming Languages:** R, Python, SQL, SAS, Bash, LaTeX
- **Data Analytics Tools:** Tableau, Jupyter Notebook, Excel, Markdown, Qualtrics

## PROFESSIONAL EXPERIENCE

**WellDone International (NGO)** **June 2018 – Present**
*Data Science Intern* *San Francisco, CA*
- Train and apply random forest machine learning model to predict hand pump failures for governments and aid organizations
- Research, quantify, and summarize the impact and results of existing data projects in water, sanitation, and hygiene sector

**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 social, economic, and demographic datasets to conduct exploratory data analysis and identify areas in need of hunger alleviation services; created multivariable predictive model to predict pounds unmet by census tract using Python and R
- 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

**Classifying Legendary Pokémon (R)** **May 2018**
- Developed classifier to predict whether a Pokémon is legendary or not with 98.8% accuracy using k-means clustering

**Predicting Child Heights from Parent Heights (Python/Jupyter Notebook)** **April 2018**
- Fitted data using linear regression, applied method of least squares, calculated correlation, residuals and standardized data units

**Analysis of the Location of Palindromes in DNA Sequence of Human Cytomegalovirus (R)** **March 2018**
- Used chi-square goodness-of-fit test to see if palindrome locations followed Poisson distribution; wrote report with findings

**2016-17 NBA Statistics (R)** **February 2018**
- Applied bootstrap/jackknife resampling; calculated sample statistics, standard errors, correlations, and confidence intervals

**Face Lattice of a Convex Polytope (Research Talk)** **December 2017**
- Discussed the face lattice of convex polytopes and how to completely characterize the combinatorial structure of a hypercube

## LEADERSHIP & TEACHING EXPERIENCE

**Berkeley Model United Nations** **September 2016 – Present**
*Director of Organizational Partnerships and Co-Chair of UN Economic and Financial Committee* *Berkeley, CA*
- Negotiate deals with airlines, hotels, restaurants, and organizations in 5 countries to provide discounts totalling $5,000
- Moderate debate between 400 delegates, write case studies, and grade research papers to boost understanding of world issues

**UC Berkeley – Math/Statistics Departments** **January 2017 – Present**
*Reader, Math 55: Discrete Mathematics | Group Tutor, Stat 134: Concepts of Statistics* *Berkeley, CA*
- Lead review sessions; grade homework assignments; create tutoring worksheets; 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*
- Spearheaded organization and implementation of Visa and Career Planning Workshop for 100 international students
- Researched and planned cultural exchange events with 300 attendees to facilitate inter-cultural awareness and understanding

**Interests:** *Karate (2nd Degree Black Belt), hockey, swimming, 20th century history, piano (Associate Diploma in Piano Performance), international affairs*