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, apply, and evaluate 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

Pacman Agent (Python) **June/July 2018**
- Created collaborative agent that implemented A* search, minimax game trees, and reinforcement learning to play Pacman

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

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, international affairs, piano (Associate of the Royal Conservatory of Music)*