Eric Chuu

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Education

Texas A&M University — **College Station, TX**
PhD, Statistics — *Expected: 2022*
Research Interests: machine learning, computer vision, statistical computing

UCLA — **Los Angeles, CA**
B.S., Mathematics of Computation, Statistics — *June 2017*
Computer Science Coursework: Data Structures, Algorithms, Computer Systems
Quantitative Coursework: Machine Learning, Probability, Optimization, Real Analysis, Linear Algebra, Linear Models

Notable Projects

Facial Reconstruction, Discrimination, Detection
- Reconstructed faces with 20 numbers (originally 256) using principle component analysis to extract key features
- Implmented AdaBoost in both Matlab and Lua/Torch and used parallelization during the training process in conjunction with the Viola-Jones detection framework to develop an algorithm that could identify faces in images

Rowing Logger
- Developed an mobile app to extract numeric data from photos of LCD screens attached to rowing machines
- Used PyTesseract and OpenCV for the OCR portion, achieving reading accuracy of 90% across variable lighting
- Created a way for rowers to easily log times, track progress, and compete against teammates for optimal improvement

Predicting Election Outcomes using Facial/Social Traits
- Created a hierarchical model that predicts the outcome of political elections with an accuracy of $> 60\%$ using *only* images of politicians' faces and their perceived social traits (confident, attractive, energetic, rich, etc.)
- Trained a binary SVM to determine nameable traits (wears glasses, gray-haired, wide-set eyes, etc.) which were then used to train a RankSVM model to assign social dimensions from a pool of 14 pre-determined traits - these traits were then used as predictors in the final layer of the model to predict winners/losers of elections

Work/Leadership Experience

Texas A&M University Statistics Department — **College Station, TX**
Teaching Assistant — *August 2017 – Present*
- Prepare and grade learning material for students in introductory statistics and probability courses (STAT 302)
- Hold weekly office hours to assist students with homework, exam preparation, and statistical software

Department of Medicine Statistics Core — **Los Angeles, CA**
Assistant Statistician — *October 2016 – June 2017*
- Aided resident statisticians with data management and database design with goals of efficiently processing client data and generating valuable insights so that medical professionals can more effectively help their patients
- Created visualizations using R of client data and suggested appropriate models to more easily interpret the data and make informed and statistically-backed decisions

UCLA Datafest — **Los Angeles, CA**
Planning/Marketing Committee, Participant — *December 2015 – June 2017*
- Awarded runner-up for best visualization for a descriptive heat map that showed domestic travel trends
- Organized the marketing/publicity end of a data science competition in which teams from all over California came to UCLA to attempt to gain the best insight on a dataset provided by Expedia over a span of 48 hours

Skills

- **Programming Languages:** Proficient in Java, Python, R, Matlab; Familiar with C, C++, Lua
- **General:** Linux/Unix, Git, Torch, LaTeX

Interests

- Tennis, NBA, sports analytics, dragonboat, poker, fantasy and classic literature