Matthew Dong

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Education

- **University of California, Berkeley** — Berkeley, CA
  Bachelor of Arts in Data Science — *Expected Graduation: Spring 2021*

Experience

- **Computational Approaches to Human Learning (CAHL) Lab** — Berkeley, CA
  Software Developer & Research Assistant — *May 2018 - Present*
  - Collaborated on software development and machine learning research teams building a course recommender system for UC Berkeley, annual traffic to site includes 10% of undergraduate population of 30,000 students.
  - Conducted general full-stack feature development and testing, helped manage model retraining pipeline incorporating course API data streams and student enrollment information updates from the campus registrar office.
  - Designed and built the system's enhanced search feature *(askoski.berkeley.edu/search)*.
- **Sabre Corporation** — Southlake, TX
  Software Engineering Intern — *May 2019 - Aug 2019*
  - Engineered new system functionalities on Sabre's developer portal site *(beta.developer.sabre.com)*, used to access published APIs from operational units across the company.
  - Contributed production code with unit and functional test coverage for content management system (Drupal) enhancements, incorporated stakeholder specifications, worked in agile environment.
- **Stat 89A: Linear Algebra for Data Science** — Berkeley, CA
  Teaching Assistant — *Nov 2017 - May 2018*
  - Collaborated with instructor and staff members to scale course infrastructure as well as prototype materials for the pilot full-version offering of the class. Guided and mentored students during office hours and discussion sections.

Awards and Publications

- **Conference Proceedings**: Dong, M., Yu, R., Pardos, Z.A. (2019) Design and Deployment of a Better Course Search Tool: Inferring latent keywords from enrollment networks. In M. Scheffel & J. Broisin (Eds.) Proceedings of the 14th European Conference on Technology Enhanced Learning (EC-TEL). Delft, The Netherlands. Springer. Pages 480-494.
- **Undergraduate Research Fellow**: Received $6,000 grant to conduct a self-directed research project under the guidance of a faculty mentor. Presented work on learning analytics applications at a university research conference.

Projects

- **Spend Friend**: Personal finance manager web app with Amazon Alexa skill. Developed RESTful API service for database storing client info and spending history. Won PayPal Sponsor Prize at Cal Hacks 5.0. *(Firebase, Flask, Webhooks, HTML & CSS, Heroku, PayPal API)*
- **SafeFront**: A next generation 911 dashboard for both first responders and relief agencies. Built backend service housing image classification and sentiment analysis models processing incoming mobile data. Top 30 finish at PennApps XVIII out of 200 teams. *(React, Flask, Google Maps API, Twilio API)*
- **Remote Cardboard**: Screen mirroring device allowing users to control multiple devices from a Raspberry Pi interface. Client-server communication enabled using WebSockets API. *(Raspberry Pi, WebSockets, Javascript, Python)*
- **T-Hug Life**: Interactive 2-D tile based game supporting multiplayer mode, random world generation, and multiple goal states. Applied test driven development, object oriented design, and data structure & algorithms knowledge. *(Java)*
- **By the Numbers**: Personal case studies based on biometric data collected on my life for the past 5 years. Built models, created visualizations, and performed statistical analyses to answer questions regarding productivity, happiness, sleep, stress, and others. Published blog posts communicating results on personal website. *(R)*

Skills

- **Languages (Proficient)**: Python, Java, Javascript **Langauges (Familiar)**: HTML/CSS, PHP, R
- **Web Technologies**: Angular 6, Flask, Git, Chrome developer tools, Bash, SQLite, Docker, TravisCI
- **Data Science Tools**: Python Stack (Pandas, NumPy/SciPy, SciKit-Learn, NLTK, Keras), LaTeX
- **Relevant Domains**: Full-Stack Web Development, Data Science, Machine Learning

Updated: 01/2020