# Matthew Dong

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## EDUCATION

- **University of California, Berkeley** — Berkeley, CA
  *Bachelor of Arts in Data Science; GPA: 3.91* — *Expected Graduation: Spring 2021*

## EXPERIENCE

- **Computational Approaches to Human Learning Research (CAHLR) Lab** — Berkeley, CA
  *Research Assistant & Developer* — *Apr 2018 - Present*
  - Collaborated in research and development teams building a course recommender system at UC Berkeley, tool used monthly by approximately 10% of undergraduate population of 30,000 students.
  - Augmented the system's functionality by building its enhanced search feature *(askoski.berkeley.edu/search)*. Trained and optimized machine learning models, created back-end endpoints, designed and implemented the user interface.

- **Sabre Corporation** — Southlake, TX
  *Software Engineering Intern* — *May 2019 - Aug 2019*
  - Designed and implemented features on Sabre's developer portal site *(beta.developer.sabre.com)*, used to access hundreds of published APIs from operational units across the company.
  - Shipped production level code with unit and functional test coverage to enhance the content management system's functionality, communicated with stakeholders for feedback, participated in agile workflow environment.

- **Stat 89A: Linear Algebra for Data Science** — Berkeley, CA
  *Teaching Assistant* — *Nov 2017 - Feb 2019*
  - Worked with staff members to scale course infrastructure and prototype materials for the pilot 4-unit 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. Design and Deployment of a Better University Course Search: Inferring Latent Keywords from Enrollments. In C. Lync and A. Merceron (Eds.) Proceedings of the 12th International Conference on Educational Data Mining (EDM). Montréal, Canada.

- **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)*

- **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)*

- **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)*

- **T-Hug Life**: Large scale interactive 2-D tile based game designed and implemented from scratch. Supports multiplayer mode, random world generation, and multiple goal states. Utilized test driven development, object oriented design, and data structure & algorithms knowledge. *(Java)*

- **Biometric Data Chronicles**: Extensive and ongoing personal case study based on data collected on my life for the past 5 years. Analyzed data for trends in sleep, productivity, happiness, stress, and more. Wrote articles communicating results revealed by visualizations & statistical analyses and published on personal website. *(R)*

## SKILLS

- **Languages (Proficient)**: Python, Java, R          **Langauges (Familiar)**: Javascript, HTML/CSS, PHP
- **Web Technologies**: Angular 6, Flask, Git, Chrome developer tools, Bash, MySQL, 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