

Matthew Jeng

2520 Hillegass Ave. Berkeley, CA 94704

mjeng@berkeley.edu

(973) 908-5890

<https://github.com/mjeng>

EDUCATION

University of California, Berkeley

B.S. Electrical Engineering and Computer Science

Expected Graduation: May 2020

GPA: **3.83 / 4.00**

Coursework: Algorithms, Machine Learning (IP), Artificial Intelligence, Computer Architecture, Data Structures, Discrete Math

Organizations: CodeBase (software consulting), Theta Tau (engineering fraternity), Eta Kappa Nu / HKN (EECS honor society)

Leadership: Western Region Conference Organizer (Theta Tau), Industrial Relations Chair (Eta Kappa Nu)

Online Coursework

TeamTreeHouse: Swift/iOS (50 hours), Java/Spring/Maven/JUnit (20 hours), Internet Architecture (4 hours)

Coursera: Bitcoin and Cryptocurrency Technologies (Princeton University), Machine Learning (Stanford University)

Udemy: Java Apache Spark

TECHNICAL SKILLS/TOOLS

Proficient: Python, C, Swift, Java

Familiar: MATLAB, HTML/CSS, SQL

Learning: Scala

Git, Pandas/NumPy, Postman

JUnit, Spark, Flask, Heroku, Spring, Maven, Twilio, BeautifulSoup

Tkinter, Pillow

RELEVANT EXPERIENCE

Application and Systems Engineer – Prudential Financial

June 2018 – present

- Developed Prudential's LINK application, a unified dashboard that brings together all of Prudential's financial services
- Optimized using Apache Spark distributed computing a batch process that updates millions of user profiles at once
- Migrated project code that sends HTTP requests to updated service API endpoints, and wrote accompanying tests

CS 61A Undergraduate Instructor – UC Berkeley

June 2017 – present

- Taught a lab and discussion of ~35 students (per semester) as an official staff member for a core Berkeley CS class
- Took part in weekly meetings to adjust the course to fit student needs and to improve it for future semesters
- Guest lectured 400 students on the structure of Scheme, one of the three major languages used in the class

PERSONAL PROJECTS

Daily Comic Service (Python, HTML/CSS) – <https://daily-xkcd.herokuapp.com>

February 2018 – June 2018

- Developed a full-stack application that sends comics scraped from <https://xkcd.com> daily to users through text
- Uses Twilio API to send texts, BeautifulSoup for web scraping, Google Sheets API (db), and hosted through Heroku
- Deployed an accompanying HTML/CSS website served by Flask that sends form data to the backend/database
- Scales well, with a database soft cap of 500,000 users and batched API requests to prevent rate limiting

Ad Tech Machine Learning Models (Python/NumPy)

January 2018 – May 2018

- Hired by Polymorph ad-tech to build ML models around their unified ad auctions to help maximize their revenue
- Used several approaches including logistic regression with SGD, random forests, and field aware factorization
- Worked with over 200GB of user-ad interaction data on AWS to extract demographic trends and ad click through rate

Jukebox Control System (Python, C++)

February 2017 – May 2017

- Constructed a Bluetooth/AUX enabled jukebox that could also play music from a customizable preloaded playlist
- Programmed the music functionality on the Raspberry Pi and patterns into the jukebox's lights using an Arduino
- Acted as the project lead, coming up with the overall design then compartmentalizing the work and assigning teams

Bear Maps (Java)

March 2017 – April 2017

- Developed a small-scale version of Google Maps for the Bay Area, including zoom and route-mapping functionalities
- Parsed XML data files to retrieve location information used to autocomplete user input and tag specified locations
- Rendered map image tiles efficiently in correspondence to user queries, minimizing lag for zoom in/out functions

Database Management System (Java/JUnit)

February 2017 – March 2017

- Developed a small-scale relational database management system like SQL, queried using domain specific language
- Designed database implementation, leveraging different Java packages to parse user input and query database
- Utilized test-driven development using JUnit to refactor code for efficiency and to ensure working progress