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UC Berkeley EECS student looking for full-time opportunities in software engineering after **graduating in May 2017**.
All project code, documentation & **demo** available at www.pysim.me/projects.

EXPERIENCES

Synocate, Palo Alto — *Software Engineer Intern*

July 2016 - Sep 2016

Role: Helped build tools to enhance college admissions experience (tech stack include Node.js, Express, PostgreSQL).

Projects
1. **Web scraper and browser emulator** to gather essay prompts to be populated to our site. Also provide REST API of the prompts using Swagger.
2. OkCupid's **matching algorithm** to best match counselors with students which improved customer satisfaction.
3. Summer programs **recommender system** w/ text search engine. A/B tests showed increased click-through rates in the group w/ recommendation.

University of California, Berkeley — *Academic Intern*

Jan 2016 - Present

Role: Help students in CS 189 (Machine Learning) and CS 61A (Intro to CS) with homework, projects and labs. Also help hold review sessions.

SELECTED PROJECTS

Networking
1. PyChat — Full-stack (MVC) webapp that supports user management, instant messaging (w/ SSL on TCP/IP to encrypt, secure transmitted data) & A.I. ChatBot.
2. Routing — Implemented a learning switch (L2) and distance vector (L3) that scales to network with hundreds of routers and works in spite of link failures.

Systems/Databases
1. Compiler — Compiles an Object-Oriented language source code into Java bytecode like language and then executes the compiled class files.
2. DBMS — SQL (relational) database management system that supports CRUD & Join operations, B+ trees indexing to enhance performance, query optimization and concurrency control. Written in Java.
3. NoSQL — Distributed KeyValue store that uses 2PC protocol for leader & follower servers coordination. It is fault tolerant and supports crash recovery.
4. PintOS — x86 operating system framework that supports kernel threads, user programs execution and file systems w/ buffer cache so that data is served faster.

A.I. & Machine Learning
1. Computer Vision — Neural network that does handwritten digit recognition.
2. Image Procesor — C application that computes depth info from stereo images. Used openMP for multithreading and Intel SSE intrinsics for data-level parallelism.
3. Self-driving Car —Robot that learns traffic rules by itself and drives accordingly.
4. Sentiment Analysis — Simple Natural Language Processing web application.

EDUCATION

University of California, Berkeley - *B.S. in EECS*

Graduating in May 2017, GPA: 3.2

Coursework:

1. Fundamentals: Data Structures, Algorithms, Discrete Math, Systems Design I/II
2. Systems: Computer Architecture, Operating Systems, Computer Networking, Compilers and Programming Languages, Databases
3. Data Analytics: Data Science, Artificial Intelligence, Machine Learning, Probability in EECS, Game Theory

SKILLS

Programming Languages
1. Proficient: Python, Java, C/C++, SQL
2. Familiar: JavaScript, Node.js

Frameworks
1. Big Data: Spark (w/ MapReduce)
2. Web: Flask (Python), HTML, Bootstrap CSS

Libraries:
1. Data Analytics: TensorFlow, Sklearn, Numpy, Matplotlib
2. Testing: JUnit (Java)
3. Web: jQuery, Scrapy

Other tools:
Git, Maven, Heroku Cloud, AWS, PostgreSQL, mongoDB

EXTRACURRICULARS

Data Science Society at Berkeley
Social Network Analysis on borrowers and lenders on Kiva's microlending platform.

Math Tutor Provided tutoring assistance to students at the Math Learning Center.

Hack UCSC Semi-finalists in the hackathon where my team and I built cccPlan using Node.js and mongoDB.

LANGUAGES

Chinese, Cantonese, Malay