

Pei Yong Sim

EECS student looking for full-time opportunities in software engineering **starting in Sept 2017 (or earlier)** after **graduating in May 2017**. (Projects are available at pysim.me/projects; Resume available at pysim.me/cv.pdf)

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EXPERIENCES

Rakuten Ebates, San Mateo — Software Engineer Intern

Jun 2017 - Aug 2017

Role: Help build personalized product catalog (recommender system) using machine learning (tech stack include Java Spring, Spark, ElasticSearch).

Synocate, Palo Alto — Intern

July 2016 - Sep 2016

Role: Helped build tools to enhance college admissions experience.

Projects

1. Web scraper and browser emulator to gather essay prompts to be populated to our site (tech stack include Node.js, Express, Swagger, PostgreSQL).
2. OkCupid's matching algorithm to best match counselors with students.
3. Recommender system of summer programs prototype.

University of California, Berkeley — Academic Intern

Jan 2016 - Present

Role: Help students in CS 189 (Machine Learning) and CS 61A (Intro to CS).

SELECTED PROJECTS (* denotes in progress)

Networking

1. **PyChat** — A full-stack (MVC) webapp that supports user management, instant messaging (with WebSocket protocol on top of TCP/IP) and AI ChatBot. Also provide a RESTful API (demo: pychat.pysim.me).
2. **Routing** — Implemented a learning switch and distance vector routing with split horizon and poisoned reverse for efficient packet forwarding.

Systems

1. **DBMS*** — A SQL database management system that supports CRUD & Join operations, optimized querying and concurrency control. Written in Java.
2. **PageRank** — Implemented the algorithm using MapReduce programming paradigm in the Spark framework which then ran on Amazon EC2.
3. **Pintos** — A Unix operating system framework that supports kernel threads, user programs execution and inode-structured file systems.
4. **Scheme** — Parses and evaluates the Scheme language using Python.

A.I. & Machine Learning

1. **OCR** — Built a neural network that does handwritten digit recognition.
2. **Sentiment Analysis** — Simple NLP application (demo: sentiment.pysim.me).
3. **SIXT33N** — Robot vehicle which maneuvers according to voice commands.

EDUCATION I

University of California, Berkeley - EECS

Aug 2015 - May 2017, GPA: 3.2

Coursework (* denotes in progress):

1. **Fundamentals:** SICP, Data Structures, Algorithms, Signals & Systems Design
2. **Systems:** Computer Architecture, Operating System, Computer Networking, Compilers*, Databases*
3. **Data Analytics:** Data Science, Artificial Intelligence, Machine Learning, Game Theory, Probability in EECS*

SKILLS

Programming Languages

1. Proficient: Python, Java, C, SQL
2. Familiar: JavaScript, Ruby, Node.js

Frameworks

1. Distributed Computing: Spark
2. Web: Flask, Express, HTML, Bootstrap CSS

Libraries:

1. Data Analytics: Sklearn, Numpy, Matplotlib
2. Testing: JUnit
3. Web: jQuery, Scrapy

EXTRACURRICULARS

Data Science Society at Berkeley

Identifying factors that influence popularity of a loan on Kiva's microlending platform

Cabrillo College Tutor Provided tutoring assistance to students at the Math Learning Center

LANGUAGES

Chinese, Cantonese, Malay

EDUCATION II

Cabrillo College, Santa Cruz - CS

Aug 2013 - May 2015, GPA: 3.9

Completed transfer work in computer science, physics and math. Built a website called cccPlan using Node.js and MongoDB at Hack UCSC 2015.