

CHARLIE SHOU

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EDUCATION

University of California Berkeley, California

Expected 2024

BA in Computer Science, 4.0

Relevant Coursework: Structure of Computer Programs, Data Structures, Designing Information Devices and Systems, Discrete Mathematics and Probability Theory, Efficient Algorithms, Machine Structures

Clubs and Societies: PlexTech, Cal Dragon Boat, Upsilon Pi Epsilon (UPE)

EXPERIENCES

Software Engineer Intern, Chevron - San Ramon, CA

May 2022

Software Developer, Polytur - Santa Clara, CA

May 2021 – Present

- Working to refactor Polytur's data infrastructure design platform to address deep rooted design flaws
- Redesigned frontend components using Typescript, React, and Redux
- Implemented backend utilities for services like Postgres and Redis

Software Engineer Intern, Precise Software Solutions - Rockville, MD

June 2021 - August 2021

- Developed a low-cost food traceability software using React, Flask, and MongoDB
- Designed Flask backend to transform XML/JSON GS1 data, interface with Neo4j, and facilitate user interactions

Backend Developer, ScholarHub (Plextech) - Berkeley, CA

February 2021 - May 2021

- Developed "Groups" and "Chat/Direct Message" features for ScholarHub's educational platform
- Implemented OAuth 2.0 services and chat features using MongoDB, Express, Socket.IO, and Node.js

Software Engineer Intern, Precise Software Solutions - Rockville, MD

May 2020 – August 2020

- Worked to build the foundation of the counterfeit drug detection project
- Built web app to utilize Google AutoML and OCC analysis techniques using Javascript, Python, and Reactjs
- Utilized Firebase, Flask, and GCP APIs to connect the frontend and backend

Student Researcher, University of Maryland - College Park, MD

June 2019 – September 2019

- Conducted research with a team of students on the application of machine learning in Ramsey theory
- Developed a reinforcement learning algorithm to produce empirical evidence for Ramsey Game numbers

PROJECTS

Smile - Programming Language/Interpreter

- Used Python to develop an interpreter for Smile, a programming language designed around the use of binary operations
- Supports conditionals, user-defined functions, variable declaration, and other common features

Gitlet - Version Control Tool

- Developed a simplified version of Git version control using Java as part of the 61B curriculum
- Implemented data structures to emulate commits, remotes, and other Git commands

SKILLS

Languages: Python, Java, Javascript, SQL, Lisp/Scheme, HTML/CSS, C, RISC-V

Technologies: Git, React, Firebase, Node.js/Express, Flask, MongoDB, Google AutoML, AWS (Glue, S3, EC2, RDS), OpenMP, Pandas