CHARLIE SHOU

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EDUCATION

University of California Berkeley, California   Expected 2023
BA in Computer Science, 4.0
Relevant Coursework: Structure of Computer Programs, Data Structures, Information Systems, Discrete Mathematics, Probability Theory, Efficient Algorithms, Machine Structures, Artificial Intelligence
Clubs and Societies: PlexTech, Cal Dragon Boat, Upsilon Pi Epsilon (UPE)

EXPERIENCES

Software Engineer Intern, Chevron - San Ramon, CA   May 2022

Software Developer, Polyture - Santa Clara, CA   May 2021 – Present

- Working to redesign Polyture's data infrastructure design platform to provide mid-market companies with easy-to-use tools for data analytics
- Developed automation tools to accelerate the CI/CD process and ensure code quality
- Implemented backend data visualization and transformation functions using PySpark, Pandas, and NumPy

Software Engineer Intern, Precise Software Solutions - Rockville, MD   June 2021 - August 2021

- Developed a low-cost food traceability software recognized as a winner of FDA's food traceability challenge
- 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 class management platform to service thousands of students worldwide
- 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 perform frontend and backend integrations

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 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
- Implemented data structures to emulate commits, remotes, and branching

SKILLS

Languages: Python, Java, Javascript, SQL, Lisp/Scheme, HTML/CSS, C, RISC-V
Technologies: Git, React, Vue, Firebase, Node.js/Express, Flask, MongoDB, MySQL, Google AutoML, AWS (Glue, S3, EC2, RDS), Pandas, Spark, NumPy