Ryan Mao

607-279-9216 | rwm275@cornell.edu | ryanwmao | ryanwmao

Education

Cornell University   Aug 2020 - May 2024
Bachelor of Science in Computer Science   GPA: 4.02

Relevant Courses: Object Oriented Programming and Data Structures, Functional Programming, Analysis of Algorithms, Compilers, Computer System Organization, Machine Learning, Principles of Large-Scale Machine Learning Systems, Operating Systems

Experience

GrubMarket   Jun 2023 - Aug 2023
Software Engineering Intern   *San Francisco, CA*

- Built an internal tool for asset valuation and data visualization, with a Typescript/React.js frontend and Java Spring Boot backend
- Effectively coordinated workflow with the team by utilizing Jira tickets, pull requests, and version control to communicate progress
- Created a comprehensive JUnit and Mockito test suite from scratch to ensure the reliability and functionality of the internal tool

Visa   May 2022 - Aug 2022
Software Engineering Intern   *Highlands Ranch, CO*

- Developed a robust Bash script package to fully automate a 3-hour code deployment process for 5 different services on remote servers
- Implemented a shell script service to monitor and track critical statistics on QA and production servers from a centralized server
- Presented code demos to multiple teams, incorporating feedback to enhance user experience and address project concerns

Cornell Hyperloop   Sep 2021 - Current
Software Developer   *Ithaca, NY*

- Collaborated with teammates to design and implement a Graphical User Interface (GUI) to monitor and operate the Hyperloop pod
- Actively participated in biweekly Scrum sprints, providing valuable feedback to support team progress and drive improvements
- Mentored new members to proficiently utilize the team's tools and technologies, including Git and Python's PyQT module

Cornell University   Aug 2021 - Current
Teaching Assistant   *Ithaca, NY*

- Supported students in Object-Oriented Programming & Data Structures, Analysis of Algorithms, and Machine Learning courses
- Provided personalized guidance and feedback to students, leading to understanding of challenging homework assignments

Cornell SciFi Lab   May 2021 - Sep 2022
Undergraduate Research   *Ithaca, NY*

- Led a team of five students in a biometric authentication project, coordinating meetings and work sessions for smooth progress
- Trained deep learning models in PyTorch on collected user data for image segmentation, incorporating insights from recent research
- Engaged in paper readings, presenting and discussing published academic research within the lab for comprehension and insight

Projects

Eta Compiler | C++   *Apr 2023*

- Collaborated with three classmates to develop an end-to-end compiler in C++ for a fictional programming language "Eta"
- Implemented lexer, parser, type checking, x86 assembly translation, as well as optimizations like dead code elimination
- Achieved a 60x speed improvement compared to the class average, earning an honorable mention in the class bakeoff

OCamlSQL | OCaml   *Mar 2021*

- Developed a terminal-based SQL query program in OCaml for the Functional Programming class project (2000+ LOC)
- Engaged closely with team members throughout the project's development, actively contributing to design and implementation
- Prepared and delivered live demos at various milestones, showcasing the program's functionality and progress

Skills

Technical Skills   Python (NumPy, Pandas, Pytorch), Java, C/C++, SQL, Git, Bash, React.js
Engineering Skills   Object-Oriented Design, Algorithms and Data Structures, Agile Development, Version Control
Interests   Hip-Hop/Rap, Weightlifting, Video Games, Basketball