

Ellen Chan

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Education

University of San Francisco

Master of Science in Computer Science

August 2021 – May 2024

GPA: 3.97

Relevant Coursework: Algorithms, Systems Programming, Practical Software Development, Machine Learning, Network Programming, Cloud Computing

University of California, Davis

Bachelor of Science in Chemical Engineering

September 2013 – June 2017

Skills

Languages: Java, Python, C, JavaScript/TypeScript, SQL

Frameworks/Web Development: Node.js, Django, React, Jetty/servlets, Svelte, Vite, Phaser, JUnit, Jest

Tools: IntelliJ, PyCharm, Visual Studio Code, Git/GitHub, PostgreSQL, MySQL, NLTK (Natural Language Toolkit), PyTorch, numpy, pandas

Work Experience

Surefyre

San Francisco, CA

Software Engineering Intern

May 2023 – Present

- Refine form generation by upgrading schemas using Python to improve clarity and compliance with industry standards
- Integrate billing functionality to the platform, incorporating and unifying data passed between the platform's PostgreSQL database, Django models and other invoicing services
- Design webhook integration, implementing Django view functions in Python to enhancing real-time communication with external billing services

University of San Francisco

San Francisco, CA

Tutor/Teaching Assistant

September 2022 – May 2023

- Provided peer-to-peer support and guidance for students in computer science courses
 - Aided in a deeper understanding of various computer science topics and debugging software
 - Conducted labs to reinforce learning, and grade assignments in Python for scientific computation and machine learning course
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Projects

Racing Roguelike: <https://github.com/rahoi/racing-roguelike>

- Contributed to the development of a browser-based video game using TypeScript and the Phaser framework, blending two popular genres—car racing games and roguelike games
- Implemented procedural generation of the race track and surrounding map terrain for levels as 2D tile maps
- Executed CI/CD pipeline using GitHub Actions to automatically build and redeploy the video game to GitHub Pages whenever code is committed to the repository

Hotel Review Website:

- Developed a hotel review website in Java where users can register, login, search hotels, and write/edit reviews
- Employed MySQL database to store data such as hotel information, reviews, and users' encrypted passwords
- Utilized Ajax to update web pages without reloading when navigating through review pages, favoriting hotels, and displaying current weather information for hotel locations

Network Compression Detection:

- Built network applications in C to detect network compression in cooperative and uncooperative environments
 - Implemented TCP, UDP, and raw sockets to send and receive packets and keep track of their arrival
 - Manually setup IP and TCP packet headers to include appropriate checksum, flags, and timeouts
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Affiliations

Committee on Information Technology Strategy

University of San Francisco