Feiyang (Sunny) Guan

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA May 2025

B.S. in Mathematical Science, Intended Major in Computer Science, GPA: 4.0/4.0

Relevant courses: Parallel Algorithms, Computer Systems, Theoretical Computer Science, Functional Programming

EXPERIENCE

Carnegie Mellon University School of Computer Science Aug 2022 - Present

Teaching Assistant

- Lead recitations and office hours for 15-112, a **Python** course.
- Teach students on how to write clear, robust, and efficient code using top-down design, informal analysis, and effective debugging.
- Utilize open-source projects such as **Viztracer** to visualize Python code.
- Cooperate with other TAs to improve recitation quality and piazza answering efficiency.

PROJECTS

Protigue Eats May 2022 - Aug 2022

- Developed an online food ordering web app featuring **Frontend Backend Separation** with a partner.
- Designed a **RESTful API** document for smooth communication between frontend and backend developers.
- Created both management webpages for restaurants and ordering webpages for mobile clients.
- Built the backend server with **Java** and **Spring Boot** framework.
- Implemented a Role Based Access Control system with **Spring Security** and **JWT**.
- Improved **MySQL** database connection speed by **Druid** datasource and developing efficiency with **MyBatis-Plus**.
- Optimized ordering experience with **Redis** caching popular meals.

Portfolio website Sep 2022 - Oct 2022

- Built a **responsive** portfolio website based on **Vue.js** and deployed on Netlify.
- Implemented the website as a Single Page Application to reduce loading time with the help of **Vue-Router**.
- Ensured a uniform design style on both computers and mobile devices by using **TailwindCSS**.
- Beautified the webpage with transition animation and a theme switcher between light and dark themes.

Dirt Drift Nov 2021 - Dec 2021

- Developed A **Python** racing game featuring real-world physics simulation.
- Allowed users to import custom racing tracks with **OpenCV** processing track images into game data.
- Accelerated collision calculation by **NumPy** module.
- Enabled **Game AI** with a backtracking algorithm.

SKILLS

Programming Languages: Java, Python, C, C++, SQL, Vue, HTML/CSS, JavaScript

Tools: Spring Boot, MySQL, Vue.js, TailwindCSS, Redis, MyBatis-Plus, Nginx, Git, Linux