Yue (Elsie) Wu

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Education

New York University — New York, NY
Bachelor of Arts in Computer Science — GPA: 3.73 — *Sept. 2020 – May 2024*

University of California San Diego — San Diego, CA
Master of Science in Computer Science — *Sept. 2024 – June 2025(expected)*

Related Courses: Basic Algorithms, Computer Systems Organization, Computer Networks, Data Structures, Data Management and Analysis, Operating Systems, Object Oriented Programming, Parallel Computing

Technical Skills

Languages: Python, Java, C/C++, C#, PostgreSQL, JavaScript, HTML/CSS
Technologies/Framework: React.js, Node.js, Spring Boot, Bootstrap, MongoDB, Express.js

Experience

JD.com, Inc — Jun. 2023 – Aug. 2023
Software Engineer Intern — *Shanghai, China*

- Participated in the design and development of data visualization modules, focusing on chart functionalities for a Business Intelligence (**BI**) tool, utilizing the company's proprietary framework built atop **Spring Boot**.
- Implemented core back-end functionalities using **Java**, including chart generation, data retrieval for search queries, and the update mechanisms to ensure data integrity and responsiveness.
- Implemented multiple components of the module using **Vue.js** framework, focusing on the chart displays, and data-driven search lists.
- Designed a **MySQL** database architecture, formulating efficient schema and indices that resulted in optimized data storage solutions for user information and intricate chart data.

Projects

Face Recognition Web Application | *React.js, PostgreSQL, Express.js, Node.js* — Sept. 2023 – Dec. 2023

- Designed and developed a web application capable of recognizing faces in user-uploaded images through an integrated **machine-learning API**.
- Incorporated Clarifai face-detection API within the **React** framework to analyze and identify faces within images sourced from URLs.
- Implemented features including user authentication, detection overlays on images, user ranking system, etc.
- Designed **RESTful API** endpoints with **Express.js** and optimized **PostgreSQL** databases for efficient data management.

Mirai Botnet Research Project | *Linux* — Apr. 2023 – May 2023

- Conducted research on Mirai Botnet, a famous malware, to understand its structure and functionality.
- Deployed and configured the Mirai botnet on **Linux** systems, involving the setup of Loader, Report Server, and Command and Control systems.
- Performed a comprehensive analysis of the Mirai botnet's mechanisms exploiting **IoT** device vulnerabilities and **DDoS** attack strategies.
- Utilized **Wireshark** to monitor and capture real-time **TCP** packet transmissions to detect the attack.

Interactive VR Maze Game | *C#, Unity* — Oct. 2021 – Dec. 2021

- Implemented interactive functions within the maze using **C#** to enhance gameplay, including character navigation, item collection mechanics, and dynamic terrain modification with key items.
- Built the maze's structure in **Unity**, crafting intricate terrain designs and integrating immersive sound effects and animations to enrich the user experience and presented at the school's Interaction Design Exhibition.

Round Robin Algorithm | *C* — Mar. 2022 – Apr. 2022

- Developed a Round Robin scheduling algorithm to efficiently allocate CPU time among processes, ensuring fair execution and preventing starvation
- Utilized **C** programming language to implement the algorithm, allowing for low-level control and optimal performance