Jingyu (Joy) Wang

(929)-584-6608 joy.jingyu.wang@gmail.com Linkedin

EDUCATIONS

Baruch College | M.S., Information System, concentration in Cybersecurity | GPA: 3.9 Expected Dec 2024
New York University | M.S., Computer Engineering | GPA: 3.7 May 2023
Relevant Coursework: *Computing System Architecture, Machine Learning, High-Speed Network, Data Center and Cloud Computing*
Nanjing University of Posts and Telecommunications ("NJUPT") | B.S., Information Security | GPA: 4.0 June 2021
Relevant Coursework: *Data Structure and Algorithm, Operating System, Object-Oriented Programming, Web Development*

TECHNICAL SKILLS

Java, Python, C++/C, HTML, CSS, JavaScript, PHP, Swift, CI/CD, Git, Servlets, Spring, MySQL, SQLite, Bootstrap, JQuery, OpenCV, Numpy, Pandas, TensorFlow, Docker, Wireshark, TCP/IP, NS-3 Network Simulator, AWS, AndroidStudio, Distributed System, Windows, Linux

EXPERIENCE

VisionX LLC | San Jose, CA | Intern, Software Engineer July 2023 - Oct 2023

- Participated in the software development of a store robot management system for retail stores by using **AI** technologies based on **computer vision** and robotics.
- Built a missing detection system utilizing **Python**, **OpenCV** and **segmentation models** to effectively identify and detect missing items on the shelves, assisting the robot's restocking operations.
- Solved the false detection problem by writing algorithms for pre-processing and post-processing of images.
- Analyzed RGB-D images with **Open3D** to assist robotic arms in hanging products to target shelf hooks accurately.

NYU High-Speed Networking Lab | Brooklyn, NY | Student Researcher April 2022 - Dec 2022

- Redesigned a congestion control scheme based on Priority-Based Flow Control (PFC), which can **solve the deadlock problem** caused by burst flow in PFC.
- Implemented a switch model that provides in-switch transmission and **virtual queues(VOQ/VIQ)** simulation by **C++** in **NS-3 Network Simulator** which could not support this function before.
- Collaborated with a team of six, applying perfect communication and tasks division to halve the time it needed.

PROJECTS

StayBooking: An online stay rental application based on React and Spring Boot

- Designed and built a single page web application using **React**. Bootstrap the development with mature component library **AntD**.
- Designed and implemented the backend services based on **Spring Boot** to support stay upload, delete, search and reserve functionality.
- Used **MySQL** to store user-generated data, e.g. stay information and reservation history, and utilized **Google Cloud Storage** to store media files for the uploaded stays.
- Created geo index by **Elasticsearch** to support geo-based stay search based on user's selected locations.
- Implemented token-based server side user authentication based on the Spring Security framework.
- Deployed the backend service to **Google App Engine** for better scalability and reliability.

Job Recommendation

- Created Search, Favorite, Recommendation **Java Servlets** with **RESTful APIs** to handle HTTP requests/responses.
- Designed and built relational database schema using **MySQL** on **AWS RDS** to persist, manage and process jobs data fetched from GitHub API. Used MonkeyLearn **API** to extract keywords from position descriptions.
- Designed **content-based** recommendation, session-based authentication, keyword extraction algorithms to implement Job Recommendation engine.
- Setup and deployed to an **AWS EC2** virtual machine instance and installed **Redis** to cache Search and user Favorite results. Reduced the latency 90%.
- Constructed UI components in the frontend using JavaScript, HTML, CSS, **AJAX** enabling users to search/apply for positions, add jobs to favorite as main factors on recommendation engine design.
- Implemented sessions and login servlet to track user's status. Utilized **MD5** hashing to protect user's privacy and security. (Session Storage).
- Set up Redis cache on **EC2 machine** enabling users to read favorite items and search results from it to decrease the response latency.

COMMUNITY & LEADERSHIP

Peer Education Department, Red Cross Society of NJUPT Students' Branch | Department Leader Sept 2018 - Aug 2019

- Led a 20+ members team, organized 10+ outdoor activities and 50+ presentations which totally served 1000+ visits.
- Operated a WeChat public account and posted articles about peer education with 200+ daily visits.