Jingyi Xie

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EDUCATION

Aug 2019 – May 2021 **Duke University, Pratt School of Engineering**,
Electrical & Computer Engineering, Master of Science.
Major GPA: 3.9/4.0. ECE Merit Scholarship

2015 – 2019 **Southeast University**,
Electronic and Information Engineering, Bachelor of Engineering.
Major GPA: 3.96/4.0 (Top 1). Magna Cum Laude & First-Prize Scholarship (Top 2%)

SKILLS

JavaScript, Java, Python, C/C++

HTML/CSS, Django, Node.js, React.js, Docker, JavaFX, SQL, MongoDB, CI/CD, Emacs

INTERNSHIP

May – Aug 2020 **Software Engineer Intern**, EzTrain.
- Developed a web application to organize, prioritize and track squadron training at Seymour Johnson AFB.
- Devised and implemented back-end logic to parse uploaded spreadsheets and schedule training events.
- Designed an intuitive and interactive dashboard to show details of trainees, tasks and events.

Oct 2018 **Research Intern**, Chinese Academy of Sciences.
- Built a Modbus-based smart home control system, using MFC and C++.
- Accomplished the remote control and monitoring of LED lights, electric fans and servo drives.

Jun – Aug 2018 **Research & Development Intern**, Siemens.
- Designed and built a lab inventory management system, using VBA.
- Streamlined procedures of register, lookup, check-out and check-in lab inventory.

SOFTWARE PROJECTS

Jul - Aug 2020 **Feedback Collection App (JavaScript, React, Redux, Express, Node, MongoDB)**, side project.
- Developed a full-stack application to send mass emails to a big list of users to collect customer feedback.
- Utilized Passport and Google OAuth for authentication, Redux Form for user inputs, and Stripe for billing.

Apr – May 2020 **Mini UPS System (Python, Django, PostgreSQL, Docker, Protocol-Buffers)**, team work.
- Constructed a full-stack UPS website in Django framework, paired with world simulator and mini Amazon.
- Designed APIs and protocol buffers to coordinate communications between mini UPS and Amazon systems.
- Ensured idempotent operations and "Exactly Once" rule by keeping track of ACKs.
- Increased reliability by implementing retry mechanism.

Mar 2020 **HTTP Caching Proxy Server (C++, TCP Sockets, Concurrency)**, team work.
- Realized GET, POST, and CONNECT request handling, using daemon process and multi-threading.
- Improved performance with response caching based on the rules of expiration time and revalidation in RFC7234.

Feb – May 2020 **Risk Network Game (Java, JavaFX, Concurrency, JSON, CI/CD)**, team work.
- Built a multi-player desktop game, using Java for back-end, JavaFX and MVC design pattern for UI, TCP Sockets and JSON for communication between server and clients.
- Implemented move/attack/upgrade/alliance orders, and an online chatroom

Feb 2020 **Mini Google Protocol Buffer (Java, JSON, Gradle)**, individual project.
- Realized pulling class names and fields information from input JSON files, generating Java source code (serialization and deserialization methods included). Improved with cycle handling in object reference graph.

Nov 2019 **Mini Linux Command Shell (C++, Multi-process, OOD, Valgrind)**, individual project.
- Developed a command shell that can change directory, set and export environment variables, redirect and pipe.
- Refined with argument parsing of escape and quotation mark, and searching PATH variable for commands.