Jingyi Xie

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EDUCATION

Aug 2019 - Duke University, Pratt School of Engineering,

May 2021 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++

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

INTERNSHIP

Jun – Aug Research & Development Intern, SIEMENS.

2018 O Developed a lab inventory management system using VBA.

o Implemented operations like register, lookup, borrow and return lab inventory.

Oct 2018 Research Intern, Chinese Academy of Sciences.

• Built a smart home control system using MFC and C++.

May – Aug **Software Intern**, EZTRAIN.

2020 O Developed a web application to organize, prioritize and track squadron training at Seymour Johnson AFB.

Implemented the features to parse uploaded spreadsheets, display trainee details, and schedule events.

SOFTWARE ENGINEERING PROJECTS

Apr – May Mini UPS System(Python, Django, PostgreSQL, Docker, Protocol-Buffers), team work.

2020 • Constructed a full-stack UPS website paired with world simulator and Amazon systems in Django framework.

O Developed the back-end server using Python and PostgreSQL, and an intuitive UI with Bootstrap.

Built API to realize communications between microservices using protocol buffers.

Mar 2020 HTTP Caching Proxy Server(C++, TCP Sockets, Concurrency), team work.

Handled GET, POST, and CONNECT requests using daemon process and multi-thread.

Cached responses according to the rules of expiration time and revalidation in RFC7234.

Feb – May Risk Network Game(Java, JavaFX, Concurrency, JSON, CI/CD), team work.

2020 • Built a multi-player game, using Java for back-end, JavaFX and MVC for UI, and JSON for communication.

• Players can make move/attack/upgrade/alliance orders, and chat with each other in a chatroom.

Feb 2020 Mini Google Protocol Buffer (Java, JSON, Gradle), individual project.

• Pulled class names and fields from input JSON files to generate the Java source codes, including serialization and deserialization methods. Improved by handling objects with cycles in reference graph.

Jan 2020 Ride Sharing Web-app (Python, Django, PostgreSQL, Docker), team work.

• Supported functionality like creating accounts, login/logout, driver registration, ride selection, ride requesting, ride status viewing and ride searching. Users can request, drive for, and join rides.

Jan 2020 Malloc Library Implementation (C, Concurrency, Synchronization, TLS), individual project.

- Implemented "malloc" and "free" dynamic memory allocation functions from the C standard library, using sbrk system call and linked list.
- Improved run-time and fragmentation by merging and splitting data segments.
- Nov 2019 Mini Linux Command Shell (C++, Multi-process, OOD, Valgrind), individual project.
 - Developed a command shell to change directory, set and export environment variables, redirection and pipe.
 - Improved with argument parsing of escape and quotation mark, and searching PATH for command name.