

# Jingyi Xie

Software Engineer - ECE Master Student @ Duke University

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## Software Projects

Feedback Collection App (Jul - Aug 2020) | Side Project

JavaScript, React, Redux, Express, Node, MongoDB

- Developed a full-stack application to send survey emails to a big list of customers to collect feedback
- Utilized Passport and Google OAuth for authentication, Redux Form for user inputs, and Stripe for billing

Mini UPS System (Apr - May 2020) | Team Work

Python, Django, PostgreSQL, Docker, Protocol-Buffers

- 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 reliability and "Exactly Once" with idempotent operations and retry mechanism

HTTP Caching Proxy Server (Mar 2020) | Team Work

C++, TCP Sockets, Concurrency

- Realized GET, POST, and CONNECT request handling, using daemon process and multi-thread
- Improved performance with response caching, following rules of expiration time and revalidation in RFC

Risk Network Game (Feb - May 2020) | Team Work

Java, JavaFX, Concurrency, JSON, OOD, CI/CD

- Utilized Java for back-end, JavaFX and MVC design pattern for UI, and JSON for client-server communication
- Used socket programming and multi-thread to support multiple players and a chat room
- Participated in OOD and testing move/attack/upgrade/alliance algorithms

Mini Google Protocol Buffer (Feb 2020) | Individual Project

Java, JSON, Gradle

- Realized parsing class names and fields information from input JSON files, generating Java source code (serialization and deserialization methods included).
- Implemented cycle handling in object graph by assigning unique ID

Mini Linux Command Shell (Nov 2019) | Individual Project

C++, Multi-process, OOD, Valgrind

- Developed and tested 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

## Skills

- Java, JavaScript, Python, HTML/CSS, C/C++
- Django, Node.js, React.js, PostgreSQL, MongoDB, JavaFX, Docker, CI/CD, Emacs

## Internship

Software Engineer Intern

EzTrain (May - Aug 2020)

- Developed a web application to organize, prioritize and track squadron training at Seymour Johnson AFB
- Devised and implemented back-end logic to parse uploaded trainee spreadsheets and schedule training events
- Designed an interactive dashboard to show metrics of trainee/tasks/event
- Expected to launch this year to streamline work process of more than 30 supervisors and 500 trainees

Research Intern

Chinese Academy of Sciences (Oct 2018)

- 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

Research & Development Intern

SIEMENS (Jun - Aug 2018)

- Designed and built a lab inventory management system from scratch, using VBA
- Digitized procedures of register, lookup, check-out and check-in lab inventory

## Education

Duke University (MS - ECE)

📅 Aug 2019 - May 2021 (expected)

- GPA: 3.9/4.0; ECE Merit Scholarship

Southeast University (BS - EE)

📅 Sep 2015 - May 2019

- Major GPA: 3.96/4.0; Magna Cum Laude