

# Jingyi Xie

## Software Engineer - Master Student @ Duke University

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## Software Projects

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

**JavaScript, React, Node.js, MongoDB, Redux, Express**

- 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, Stripe for billing, Redux Form(wizard form) for user inputs, SendGrid and web-hook for email handling, and Heroku for deployment

### 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

### 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 IDs

### 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

## Education

### Duke University (M.S. - ECE)

📅 Aug 2019 - May 2021 (expected)

- GPA: 3.9/4.0; ECE Merit Scholarship
- Coursework:  
Engineering Robust Server Software  
Data Structure & Algorithm In C++  
Mobile App Development  
Computer System & Engineering  
System Programming & Engineering

### Southeast University (B.S. - EE)

📅 Sep 2015 - May 2019

- Major GPA: 3.96/4.0; Magna Cum Laude
- First Class Scholarship (Top 3%)

## Skills

- **Programming Languages:**  
Java, Python, JavaScript, HTML/CSS, Swift, C/C++
- **Platforms & Tools:**  
Django, React.js, Node.js, PostgreSQL, MongoDB, JavaFX, Linux, Docker, CI/CD

## Internship

### Software Development Intern

**EzTrain (May - Aug 2020)**

- Developed a web application to organize, prioritize and track squadron training at Seymour Johnson AFB
- Implemented back-end logic to parse uploaded trainee spreadsheets, schedule training events, and update completion status of the selected tasks
- Designed views for trainers and trainees to manage metrics of teams/tasks/events
- Expected to launch this year to help more than 30 supervisors and 500 trainees

### 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