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++
- **Platform & Tools:**
  Django, React.js, Node.js, PostgreSQL, MongoDB, JavaFX, Docker, CI/CD, Emacs

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