

Yajin Li

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA

May 2022

- Bachelor of Science in Computer Science
- Concentration: Computer Systems

RELATED COURSES

- Operating Systems
- Distributed Systems
- Introduction to Computer Systems
- Parallel and Sequential Data Structures and Algorithms
- Artificial Intelligence: Representation & Problem Solving
- Principles of Software Construction: Objects, Design, and Concurrency
- Networking and the Internet
- Probability and Computing

WORK EXPERIENCE

Distributed Systems, School of Computer Science, CMU, *Teaching Assistant*

Fall 2020 - Present

- Taught students the basics of Go programming language and concepts related to distributed systems in weekly recitations. Held office hours to answer concepts-related questions and help debugging students' projects.

TalkMeUp, *Software Engineer Intern*

May 2020 - Jan 2021

- Refactored back-end product server code into different services, Dockerized servers, deployed them as microservices on Amazon ECS, set up custom domain name and API Gateway for servers' endpoints.
- Modified back-end server code to accommodate changes of the product, like combining new features to the server and modifying results to be returned to the front-end. (Python + JavaScript)
- Added multi-language support for both front-end web pages and back-end analysis results.
- Tested the functionality and correctness of back-end analysis results.

PROJECTS

- **TCP-Reno** A fully functional TCP Reno implemented from scratch and supporting three-way handshake, flow control and congestion control.(C)
- **Web-Server** A web-server following RFC 2616 conventions that handles concurrent connections using select() function and supports HTTP pipelining. (C)
- **RPC File Operation System** A RPC system with a client stub library to allow remote file operations, like open,read,write,..., a file-caching-proxy to deal with concurrent client connections, and a server program to support concurrent connections from multiple proxies. (C + Java)
- **Webservice Dynamic Scaling** A dynamic scaling system for a simulated multi-tier web service. (Java)
- **Two Phase Commit Protocol** A two-phase commit protocol for concurrency control between shared files and supports failure recovery using logging.(Java)
- **Carcassonne Game** A Java Swing based board game Carcassonne following good software construction principles, including OOP design patterns, use of UML diagrams, and unit-testing.
- **Data Analysis and Visualization Framework** A Java extensible data analysis and visualization framework consisting of GUI tool and underlying interfaces, supporting plugins to provide source data and to visualize analyzed data.
- **Memory Allocator** A general purpose dynamic memory allocator for C programs.
- **Sync Wars** Turn-based tactics game developed with a team of programmers and game artists.(Unity, C#)
https://www.gamecreation.org/games/sync_wars

LANGUAGES AND TECHNOLOGIES

Programming Languages: C, Python, Java, Go, SML, PHP, C#, JavaScript

Applications: AWS, Docker, Git, Linux, Node.js, Unity, LaTeX, Microsoft Office