

Ju Shi

New York, NY | (917) 288-8228 | kobeshi@umich.edu | [LinkedIn](#) | [Portfolio](#) | [Github](#)

EDUCATION

University of Michigan

Bachelor of Science in Computer Science, GPA: 3.1

Ann Arbor, MI

Aug 2020 – Apr 2023

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Theory of Computation, Game Design and Development, Software Engineering, Operating Systems, Web Systems, Introduction to Computer Security

New York City College of Technology

Associate of Science in Computer Science, GPA: 3.9

Brooklyn, NY

Aug 2018 – May 2020

- SEEK Program, Search for Education, Elevation, and Knowledge Aug 2018 – May 2020
- Dean's List Aug 2018 – May 2020
- Honors Scholar Program Aug 2018 – May 2020

TECHNICAL SKILLS

Languages & Frameworks: C/C++/C#, Python, R, SQL, HTML/CSS/JavaScript, Unity, ReactJS, Flask

Skills: OOP, Distributed Systems, Multi-Threading, TCP/UDP, MapReduce - Hadoop, Pipelining, REST API

Tools: Vim, git, github, bash, L^AT_EX, Docker, Ghirda, Wireshark, Linux, Microsoft Office, Jira, Amazon Web Services

PROJECTS

Search Engine - (HTML5, Python3, REST API, MapReduce, Pipelining)

Apr. 2023

- Built a scalable search engine while incorporating information retrieval concepts such as text and link analysis.
- Created segmented inverted index of web pages using MapReduce and Pipelining.
- Built an index server and a REST API application that returns search results in JSON in order to create our search server that returns our desired search results.

Instagram - Clone (HTML5, Javascript, Python3, SQLite, React, AJAX, Flask, REST API)

Feb. 2023

- Built a clone of Instagram that incorporates both server-side and client-side dynamic pages and a REST API.
- Utilizes ReactJS and AJAX calls to the REST API for client-side dynamic pages.
- Created a simple shell script that mass inserts data into the SQLite database in order to simulate users.
- Implemented pagination in the REST API to allow for dynamic infinite scrolling.
- Deployed website using Amazon Web Services (AWS) EC2 Ubuntu instance.

Network File Server (C++, Multi-Threading, Distributed System)

Nov. 2022

- To understand file-systems, socket programming, client-server systems, and security protocols, we implemented a multi-threaded, secure network file server, that allows clients to interact with it via network messages.
- Incorporates threads for concurrency between clients. A thread is created per client that connects to the server.
- Utilizes hand-over-hand locking to prevent data hazards between files.

Thread Library (C++, Multi-Threading, Kernel, RAII)

Oct. 2022

- Re-implemented a Thread library, in C++, with a 4 class interface, cpu, mutex, cv, and thread, to understand how threads and monitors are implemented on uni-processor and multi-processor systems.
- To ensure atomicity, we manipulated interrupts and implemented a timer-based interrupt system, that generates interrupts periodically and is managed by an RAII abstraction.

WORK EXPERIENCE

Costco, Pittsfield Township

Front End Assistant

Ann Arbor, MI

Sept 2021 – Apr 2023

- Member Service, Cashier Assistant, Cart Pushing, Pressure Washing, Zamboni Driving, Stocking Merchandise, Store Organization/Maintenance, and Handling Various Machines.

Child Center of New York, Corona Arts & Sciences Academy

Volunteer, Part-Time

Queens, NY

June 2019 – Aug 2019

- Collecting, organizing, and inputting student data onto CCNY's online database.
- Assisting teachers and tutoring students in various subjects to ensure children's educational development.
- Organized and sorted files while maintaining an orderly office environment.