Siyin Ma

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EDUCATION

Carnegie Mellon University   **Pittsburgh, PA**
Master of Information Systems Management (GPA:3.96)   *08/2021 – 12/2022*
Related Coursework: Distributed Systems, Cloud Security, Natural Language Processing

Michigan-Shanghai Jiao Tong University Joint Institute   **Shanghai, China**
Bachelor of Engineering, Major in Electronic and Computer Engineering   *09/2017 – 08/2021*
Related Coursework: Operating Systems, Data Structures and Algorithms, Artificial Intelligence, Cryptography

TECHNICAL SKILLS

Skills: C, C++, Python (Flask), Java (SpringBoot), JavaScript (Angular), TypeScript (React), Golang, R, Matlab, HTML, CSS, SQL (PostgreSQL, MySQL), NoSQL(Redis, MongoDB, Cassandra, Neo4j), x86 assembly Verilog
Tools: AWS (S3), RESTful, Linux, Maven, Latex, Git, Jira, Bitbucket, Pivot table, PyTorch, Tensorflow

WORK EXPERIENCE

Amazon *Software Development Engineer Intern*   *05/2022 – 08/2022* **Seattle, WA**
- Implemented React Native user interfaces on mobile application Amazon Kids+, improved search page functionality and contents visibility; will increase 2% - 15% of search interactions
- Formulated test flow for React Components using Jest and manual tests on both iOS and Android devices
- Collaborated with UX designer, Product Manager and Software Developers in agile workplace with daily stand-ups
- Initiated design documentation, joined code review and held implementation review for team of more than 30 people

Bosch *Software Development Engineer Intern*   *04/2021 – 06/2021* **Shanghai, China**
- Developed Java SpringBoot Web application and launched resume breakpoint multipart upload function with AWS S3
- Established data localization and transformation JSON formats, and recorded in company official documents
- Constructed Python Flask structure of vehicle-end service, and resolved the multi-thread issues in logging process
- Established the RESTful APIs between 2 web application and a vehicle service, and used WebSocket to transfer data

ACADEMIC RESEARCH AND PROJECTS

Hershey's Supply Chain Automation *Data Model*   *09/2022 – 12/2022* **Pittsburgh, PA**
- Worked with a 6-people team and Hershey's Data Scientists to build a Stock Transfer Order automation Model and reduced maual work and truck cost by smoothing the truck fluctuation by 22%
- Processed data cleaning on Hershey's 6 data sets using Python and implemented model using Excel and Gurobi.
- Recommended further steps on algorithm and interface upgrades and received A+ for the capstone project

Distributed System Projects *Golang, Network*   *09/2022 – 12/2022* **Pittsburgh, PA**
- Designed a distributed Bitcoin Miner with load balancing, and build a homegrown protocol for providing reliable communication with simple client and server APIs on top of the Internet UDP protocol
- Implemented the whole Raft consensus algorithm from scratch in Golang with election and heartbeat via RPCs

VMware Elastic Platform on Idle Cloud Resources *Front-end dev*   *05/2021 – 08/2021* **Shanghai, China**
- Directed design for a Role-based Access Control user management system, and refactored PostgresSQL database
- Originated RESTful API documentations for web application interfaces, and delegated workflow for 3 teammates
- Built and tested front-end service using Angular framework to allow user information CRUD operations
- Generated login verification using mail services from Alibaba Cloud, and participated in web page UI design

Operating Systems Projects *Shell, Database*   *09/2020 – 12/2020* **Shanghai, China**
- Devised a shell that supports file I/O redirection, piped process, error handling and background job in C
- Extended a MongoDB-style database to allow query instructions, keymap and multi-thread operations in C++

Graph Embedding Undergraduate Research *Research Assistant*   *01/2020 – 03/2021* **Shanghai, China**
- Applied and analyzed algorithms of influence maximization in social network using PyTorch in Python
- Combined GNN algorithms with social network embedding problem and enhanced embedding efficiency by 10%

Tesla Stock Price Prediction *Data mining*   *Sep 2019 – Dec 2019* **Shanghai, China**
- Crawled Tesla stock price data in the last eight years from Yahoo, and processed the data cleaning
- Implemented time series model ARIMA-GARCH, machine learning model HMM and neural network LSTM using R, and trained the data to make prediction about stock price
- Visualized the data using R, presented the analysis as poster presentation, and achieved the highest score in class