Zining Zhao

Burnaby, BC | (236)989-8191 | zining.zhao@outlook.com | linkedin.com/in/Zining | github.com/Zining

Education

Simon Fraser University Sept. 2020 – Dec. 2022
Master's in Engineering *Burnaby, BC, Canada*
Coursework: Analysis Algorithm, Natural Language Processing, Data Mining, Computer Vision, Deep Learning, Project Management, Network Protocols, Communication Networks, Intelligent Systems

Beijing University of Posts and Telecommunications Sept. 2016 – Jun. 2020
Bachelor's in Logistics Engineering *Beijing, China*
Coursework: Data Structures, Computer Network, C++ Programming, Software Developing, Database Technologies

Experience

Software Developer Intern Sept. 2019 – Dec. 2019
Ericsson *Beijing, China*

- Collaborated with team members to ensure timely delivery of software components.
- Improved an application that converts Google Protocol buffer files into files of different formats for processing events using **Java**, added the function to convert GPB files to and from CSV files.
- Wrote scripts in **Python**, leveraging threading and logger library, to perform load testing.
- Participated in code reviews and provided feedback to improve overall code quality.
- Upheld **agile** principles and practices using **MobaXterm** for project management, **Git** for version control, and **PyTest** for test driven development and writing unit tests.

Projects

Human Resource Management System | *Vue, ElementUI, Spring Boot, MyBatis-plus, MySQL, Redis* Aug. 2023

- Designed and built a full-stack web application for users to management personnel information.
- Leveraged **Vue.js** and ElementUI to build web front end based on an open source front end scaffolding.
- Create CRUD operations with **Spring Boot** and **MyBatis-plus**, designed **RESTful APIs** for any https calls made to the back end from the front end.
- Utilized **MySQL** as the relational database to store and update user data and personnel data.
- Optimized authentication using **Redis** to cache the token to improve access speed.

Aerial Object Detector | *Python, PyTorch, Detectron2, Google Colab* Sept. 2022 – Oct. 2022

- Utilized **Python** to design a deep convolutional neural network to detect planes in aerial images and obtain the segmentation mask of each plane.
- Leveraged **PyTorch** and **Detectrone2** framework and GCP Colab to configure and train the model.
- Improved accuracy from baseline configuration from 59% to 86.6% by utilizing the data augmentation method and adjusting hyper parameter settings of the convolutional neural network.

Robots Automatic Path Finding System | *Python, Numpy, Matplotlib* Sept. 2022 – Dec. 2022

- Implemented different algorithms using **Python** to solve multi-agents path finding problem which is to find non-conflicting paths for multiple robots from their start locations to goal locations in a map.
- Leveraged various algorithms such as Space-Time, A*, Prioritized Planning, Conflict Based Search, and enhanced Conflict Based Search.
- Analyzed the efficiency by measuring computational time, path length and determined enhanced Conflict Based Search as the optimal choice.

Technical Skills

Languages: Java, Python, C/C++, HTML/CSS, JavaScript, SQL, MATLAB
Libraries/Frameworks: Ajax, Axios, Vue, Element, Spring Boot, Spring MVC, MyBatis, PyTorch, Keras, TensorFlow, Numpy, pandas, Matplotlib, JUnit
Tools/Databases: AWS, GCP, Git, Linux, Maven, IntelliJ, VS Code, Eclipse, MySQL, Redis, Docker, VMware, Postman, MobaXterm