Mingyi Wu

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Experience

Data Engineer – Meteorological Data Systems Project   Jun 2024 – May 2025

Data Center of Guizhou Provincial Meteorological Service

- Cleaned and standardized multi-source meteorological datasets from GNSS, millimeter-wave radar, and automated stations.
- Designed and implemented data validation and comparison to maintain consistency across different platforms.
- Developed RESTful APIs using Python (FastAPI/Flask) to processed data to system platforms.
- Collaborated with AI researchers to align quality-controlled data with model training and prediction workflows.

Research Assistant on Autonomous Vehicle Project   May 2023 – Dec 2023

Simon Fraser University, Department of Computer Science

- Extraction and analysis of vehicle dynamics relational datasets using Python and Pandas.
- Designed and implemented MariaDB database to integrate and manage sequential driving frame data, facilitating advanced temporal data analysis, incorporating data visualization for insight communication.
- Conducted debugging and optimization of the probabilistic learning algorithm tool, Factorbase
- Implemented Bayesian network through probabilistic learning, yielding an interpretable model for vehicle behaviors.

Education

MSc in Professional Computer Science.   Sep 2022 - Jan 2024

Simon Fraser University, Burnaby, Canada   *GPA 3.75/4.00*   *Concentration in Big Data*

Bachelor of Computer Science & Mathematics Honours   Dec 2018 - April 2022

Carleton University, Ottawa, Canada   *Concentration in Computing Theory and Mathematics*

Technical Skills

Programming Languages & Development: Python, Java, SQL, JavaScript, Go, Kotlin, RESTful API, Spring Boot, Node.js, React.js

Data Handling, Processing & Visualization: MySQL, MongoDB, MariaDB, Pandas, Tableau, Power BI, Matplotlib, Seaborn

Distributed Data Processing Frameworks: Apache Hadoop, Apache Spark, Apache Kafka

Tools & System Architecture: Git, Maven, Microservices architecture, Coroutines, Web Scraping, Deep Learning

Testing Tools: Robot Framework, Selenium, SoapUI, TestNG, Postman

Project Experience

ChatterSphere – Twitter Clone   Jun 2024 – Nov 2024
- Developed a full-stack social media platform using React, Node.js, and MongoDB.
- Designed RESTful APIs with Express.js for authentication, tweets, likes, and comments.
- Implemented JWT-based authentication and Cloudinary for image storage.
- Wrote unit and integration tests to ensure API reliability and maintainability

Online Social Platform with Microservices Architecture   Jan 2024 – Apr 2024
- Designed and coded scalable post-comment microservices using Java and Spring Boot.
- Utilized AWS API Gateway for request routing and containerized microservices with Docker.
- Integrated MongoDB as a NoSQL database, ensuring efficient data management.
- Developed and executed unit, component, and integration tests to verify requirements.

Player Status Tracking System   Sep 2023-Dec 2023
- Developed a real-time player tracking system with a React-based interactive UI.
- Designed and implemented robust back-end services using Java and RESTful APIs.
- Built an advanced analytical tool providing detailed insights and metrics.

Card trading E-commerce App   May 2023- Sep 2023
- Developed scalable back-end services using Flask and RESTful APIs.
- Containerized microservices using Docker to ensure seamless deployment.
- Implemented caching and data consistency mechanisms for optimization, Investigated and resolved technical issues.