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SKILLS

Frontend: React, TypeScript/JavaScript, HTML/CSS

Backend: Go, Python, Bash, TypeScript, Rust, C++

Databases: PostgreSQL, SQLite, Redis, sqlc, SQLAlchemy

Technology: Docker, RESTful, GraphQL, CI/CD, Git

FULL STACK PROJECTS

Fitfintracker

[React, TypeScript, Go, PostgreSQL, Docker, CI/CD]

- Developed a **RESTful** API using **React**, **PostgreSQL**, and **Go**, used **WebSocket** to interact with ChatGPT API in real-time. Implemented sqlc to enhance type safety and enable compile-time verification of SQL queries.
- Utilized **Docker** and GitHub Actions for **CI/CD** to ensure a reliable and scalable deployment, and a simplified workflow.

TrackItAll

[React, TypeScript]

- Currently developing a web API frontend using **React** and **TypeScript** to help track the job applications, courses, and Leetcode progress of the user.

Battleship Game Backend

[Go, PostgreSQL, Docker, Websocket, CI/CD]

- Developed a **WebSocket** API using **Go** for a Battleship game, handling the game logic and ensuring seamless communication with an iOS client application. Used **testing** library to ensure reliability and robustness of the API.
- Utilized **Docker** for containerization, GitHub Actions for **CI/CD**, and **PostgreSQL** for database management.

WORK EXPERIENCE

RWDI AIR INC. | Software Engineer

Calgary, AB | 2022 – Present

Air Quality Web API

[React, TypeScript, Python, SQL, Azure]

- Created a **RESTful** API with **React**, **Python (Django)**, and **SQL** to optimize air quality project and resource management processes.
- Streamlined meteorological data processing by integrating data retrieval from public environmental APIs, such as Environment Canada, analyzing the data, and facilitating client downloads in CSV format.
- Implemented a central hub for resources such as programming tutorials and engineering documents, enhancing user engagement and streamlining resource accessibility for engineers.

Data Pipeline Optimization and Process Automation

[Python, SQL, Bash, Linux, SSH, Testing]

- Developed a TUI app using **Python** and **SQL** to create a robust **data pipeline** for pollutants emission analysis, **resolving budget overrun challenges** by significantly improving the efficiency of results generation.
- Engineered a CLI app on the **Linux** server via **Python** and **Bash**, to streamline the analysis and visualization of meteorological and air dispersion modelling data. **Significantly reduced engineering hours** with protocols and a systematic approach for model runs.
- Led the **migration** and **refactoring** of data processing tools from R to Python to boost efficiency and accessibility. Implemented unit **testing** to ensure the accuracy of data.

CERTIFICATES

Fundamentals of Backend Engineering

Udemy | 2024

- Backend Communication Design Patterns, Protocols, Proxying, Load balancing, Security & Encryption

Cloud Computing

Coursera | (In Progress)

- Clouds, MapReduce, key-value/NoSQL stores, classical distributed algorithms, Gossip & membership, P2P systems

EDUCATION

Master's in Civil Engineering

Edmonton, AB | 2019 - 2022

University of Alberta - Research Assistant (RA)

- Utilized **Python (Pandas, Numpy, and Matplotlib)** for emission control data analysis