

Dhruwang Akbari

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TECHNICAL SKILLS

Programming Languages: Python, Java, C/C++, Javascript, Typescript, HTML5, CSS3, SQL, NoSQL

Tools and Frameworks: Visual Studio Code, Gitlab, Atlassian (Jira), RESTful, ReactJS, NextJS, Flask, Gen AI(Langchain), gRPC

WORK EXPERIENCE

Machine Learning Developer (Freelance)

October, 2023-April, 2024

Western Cyber Society | London, ON

Semester long project about correlating stock prices and sentiment analysis from tweets using AI and machine learning algorithms

- Developed and fine-tuned predictive models using Long Short-Term Memory (LSTM) networks and Support Vector Machines (SVM) to forecast stock prices based on historical data. Compared models with Moving Averages (MA).
- Integrated and processed large datasets, combining historical stock prices with real-time sentiment data extracted from Twitter, utilizing Python and various data processing libraries.
- Implemented NLP techniques to analyze and correlate Twitter sentiment with stock market trends, enhancing the predictive power of the models.

Front-End Developer Intern

May-September, 2023

Rahil Foam Pvt. Ltd. | Rajkot, Gujarat

- Recreated and organized the company's product portfolio enhancing the structure and user interface to improve user engagement and accessibility. Utilized **Next.js** for developing a dynamic and responsive front-end.
- Worked closely with product and design teams to align the website functionality with user needs and company goals. Actively participated in **agile development cycles**, contributing to planning, stand-ups, and review sessions.
- Implemented and maintained CI/CD pipelines using **GitHub Actions**. This setup streamlined development workflows, automated the deployment process, and significantly improved productivity and deployment reliability.

PROJECT EXPERIENCE

London Navigator

September 2023 - April 2024

Team Lead/Developer | Capstone Project | Tech Stack: **React Native, Flask, MongoDB, Pinecone**

- Developed an AI chatbot mobile application to help new-comers navigate through the City of London with local information and events happening in the city.
- Used React Native to develop UI for iOS and Android environments, Flask to host backend services, MongoDB for storing user information, and Pinecone vector store for documents.
- Implemented **RAG** and **Langchain Agents** to optimize user queries leveraging OpenAI and Google Places API.
- Pre-processed huge amounts of Unstructured data from government and city websites using BeautifulSoup and chunking methods to store vector embeddings to a Pinecone shard and performed vector based search to retrieve information.
- Used **Jira** stories and **Confluence** to track the progress of the project, following agile development practices.

Distributed Systems Election Algorithm

Jan-Apr, 2024

Developer | Tech Stack: **Python, QT Creator, gRPCs**

Designed and developed UI for visualizing and interacting with three core distributed systems election algorithms: Ring, Bully, and Raft.

- Coded all the election algorithms, integrating them with the UI to display dynamic algorithm behavior and state changes in real time.
- Implemented the gRPC protocol to manage network communications, facilitating the efficient transmission of heartbeats and messages between distributed nodes within the simulation.

EDUCATION

Western University | London, ON

June, 2024

- B.Sc. in Computer Science with Minor in Software Engineering
- Relevant Coursework: Operating Systems, Linear Algebra, Machine Learning, Data Structures & Algorithms, Distributed Systems, System Design and Software Testing
- Honors: Dean's Honor List (2023/24)