Aayush Halgekar

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Education

Master of Science in Computer Science — May 2024 (expected)
Northeastern University — CGPA: **3.9 / 4.0**
Courses: Programming Design Paradigms, Algorithms, Database Management Systems

Bachelor of Engineering in Computer Engineering — May 2022
Dwarkadas J. Sanghvi College of Engineering, University of Mumbai — CGPA: **9.3 / 10.0**
Courses: Data Structures and Algorithms, Software Engineering, Machine Learning

Technical Skills

- **Languages and Databases**: Python, TypeScript, JavaScript, Java, HTML, CSS, SQL (MySQL, PostgreSQL, SQLite), NoSQL (MongoDB)
- **Technologies and Frameworks**: Amazon Web Services (EC2, Lambda, S3), Dagster, Django, Node.js, Flask, React, Rasa, REST APIs, GraphQL, Docker, Kubernetes, Pandas, NumPy, PyTorch, TensorFlow, Git, Agile

Experience

Catalan AI — **Jun 2023 – Present**
Software Engineering Intern - Machine Learning — *Boston, MA*
- Developed a two-tier modeling approach, combining a forecasting pipeline with a distinct optimization model, enhancing pricing strategy accuracy, outperforming conventional single-model designs
- Developed an intelligent feature selection framework, resulting in a substantial reduction of **20%** in both Mean Absolute Percentage Error **(MAPE)** and symmetric Mean Absolute Percentage Error **(sMAPE)**, bolstering model reliability
- Researched and implemented custom metrics while exploring various time series models, including **ARIMA** and **LSTMs**, for predicting temporal trends

J.P. Morgan Chase & Co. — **Jun 2021 – Sept 2021**
Software Engineering Intern — *Mumbai, India*
- Developed a **conversational chatbot** using Rasa to execute queries on case management application and provided an intuitive way for case retrieval
- Created a pipeline that was **95%** accurate in intent classification & **97%** for entity recognition using DIET Classifiers & CRFs
- Designed the chatbot to be compatible to both **SQL(Oracle)** and **NoSQL(Cassandra) DB**

Vilas Engineering Works — **Jun 2020 - Sept 2020**
Full Stack Developer — *Mumbai, India*
- Prototyped an e-commerce website for digitizing processes using Django, HTML, CSS, JavaScript, and PostgreSQL
- Incorporated features for verification and display of products & vendors for administrators, reducing direct costs by 18%
- Implemented functionalities allowing users to view products, place and track orders, and request for returns and refunds

Projects

Event Booking App | *React.js, MongoDb, GraphQL, Node.js*
- Developed an event booking web application that allows users to register, login, create their events, book an event, and cancel their bookings
- Used **GraphQL** to build the APIs for the website, MongoDB to store users and events details. Incorporated a dataloader tool to reduce overhead resulting from frequent API calls to the database

Stock Portfolio Management | *Java, Swing, SQL*
- Implemented MVC design pattern to develop a desktop application using JAVA to manage stock portfolios in realtime
- Fetched real time stock data using Alphavantage API and stored it in SQL to perform data caching using SQLpro-gramming objects like stored procedures, functions, and triggers

Achievements

- **1st place** at LionHacks 2023, ETHBoston 2023
- **3rd place** at HackWeb3 at **Harvard University**