James Nesbitt

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Education

University of Michigan **Ann Arbor**
Bachelor of Science in Computer Science *December 2025*

- **Relevant Coursework**: Data Structures and Algorithms, Operating Systems, Intro to Machine Learning, Web Systems,Scientific Computing in R, Intro to Computer Organization, Programming and Intro Data Structures, Discrete Mathematics, Applied Linear Algebra, How ChatGPT Works, Mobile App Development, Quantum Computing

Relevant Experience

Ford Motor Company **Dearborn, MI**
Software Engineer Intern May 2024-August 2024

- Developed an Angular frontend with MSAL authentication, providing a generic search tool as well an AI-powered chatbot for communicating and querying a database of car orders for dealerships.
- Created Flask endpoints to handle direct search queries and designed a Retrieval-Augmented Generation (RAG) based large language model (LLM) via Vertex AI, to dynamically convert natural language inputs into SQL queries
- Developed a Java Spring backend to consolidate multiple regional databases into a global database, and translating frontend queries into executable SQL for the respective database.
- Utilized Tekton for continuous integration/deployment, managed APIs with APIGEE, and hosted our application Google Cloud to ensure scalable and reliable performance, as well as maintained multiple tests in each layer of the application.

Technologies Used: Angular, MSAL, Python, Flask, Java Spring, Gemini API, Vertex AI, Tekton, APIGEE, IBM DB2, SQL Server, Google Cloud

Projects

Stock Tracker App

- Developed my own Stock Tracker app in Swift to relay important financial news surrounding the world markets, track their portfolio and maintain a watchlist. Utilizes a distributed backend developed in Go and Kafka and utilizing FastAPI to fetch socks, as well as performing stock analysis using technical indicators and utilizing an LSTM model with attention mechanisms to help determine the direction of a stock, which is relayed to the UI.
- Coded With Swift, Python(FastAPI), Go, Kafka, backend hosted in GCP Cloud Run, Tensorflow, Docker.

Safe!

- Worked in a team of 6 to develop the app used for our University's free Ride Share service. Three views were made, one for the passenger, driver, and dispatcher. Developed the backend, which handles drivers and passengers benig added, communicating with them, and using Google Maps Route Optimzation to plan rides. Also developed the Chatbot used by the Passenger end, that can be used to book rides, even in other languages and relay information about the driver/service.
- Coded With Swift, Python(Flask), backend hosted in GCP, Gemini(Chatbot)

Google Travel Assistant

- Accepted to participate in a Google Ai x Mhacks hackathon, where my team and I developed an app that can tell you where you are given any picture, as well as directions to there, and can generate an itinerary given the users preferences
- Frontend built using React, powered by Gemini, backend designed with Python Flask

Machine Learning Repository

- During my Machine Learning journey, I have developed many different machine learning models, some from scratch including Transformers and SVMs, as well as with APIs such as OpenAI, Pytorch, Scikit-learn, and TensorFlow.
- Coded with Python

Code Buddy

- Wrote my own VS code extension to help with the code development process. It utilizes an LLM; some features include helping in documenting code, help with styling for web development, fix errors in logic when writing mathematical code, and turn code into memory safe RUST code.
- Coded with Typescript and uses the Gemini API

Additional Skills

Languages: C++, Python, Java, JavaScript, HTML/CSS
Framework/Runtime Environment, Libraries: TensorFlow, Sci-kit learn, ReactJS, NodeJS, Django, XGBoost, Flask, TensorFlow, Scikit-Learn, OpenAI API, Gemini