Akash Patney

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EDUCATION

University of Michigan **Ann Arbor, MI**

Bachelor of Science in Engineering in Computer Science *April 2025*

GPA: 3.6

Coursework: Data Structures and Algorithms, Operating Systems, Machine Learning, Web Systems, Statistical Computing, Computer Organization, Proof Based Linear Algebra, Logic Design

Awards/Honors: Feinberg Prize for Excellence in Writing Nominee

WORK EXPERIENCE

Ford Motor Company **Dearborn, MI**

Software Engineer Intern *May 2024 – July 2024*

- Optimized architecture of ETL data pipelines through converting existing pipelines to a singular Google Dataflow job using the Apache Beam framework in Java, thereby reducing run time by 11 minutes
- Designed a program that generates Dataflow templates to speed Dataflow development for common team use cases
- Utilized the Google Pub/Sub Messaging Service and Google Big Query to connect data from upstream data sources towards downstream systems
- Deployed several Dataflow jobs to production through Google Cloud Platform after testing in other cloud environments

Ford Motor Company **Dearborn, MI**

Software Engineer Intern *May 2023 – July 2023*

- Utilized Java, Spring Boot, Angular, and DB2 to contribute to the development of a new Ford dealer information system web application that reduces manual efforts for users and provides a more modern interface
- Designed endpoints for a REST API to help maintain the correct flow for the UI and backend application integration
- Developed software using test driven development principles for implementing different business plans offered and incorporated validations to ensure correct data is stored in the DB2 database

PROJECT EXPERIENCE

Convolutional Neural Network for Image Classification *October 2023 – November 2023*

- Employed the use of Python, PyTorch, Tensorflow, and NumPy to design a convolutional network which classifies images of different landmarks
- Utilized Grad-CAM to visualize regions of the image that contribute most to the model's classification to identify areas where performance on the testing dataset could be improved
- Incorporated techniques such as transfer learning and data augmentation to further improve model performance

Data Analytics Project *May 2022 – June 2022*

- Created a project on Visual Studio using C++ which imports data and performs mathematical computations to predict the outcomes of basketball games
- Designed an analysis spreadsheet to assist in identifying important statistical trends to embed into the program
- Programmed to allow user to specify if they are seeking predictions for a playoff series or regular season games

Portfolio Website *June 2022 – August 2022*

- Built a website using HTML, CSS, and JavaScript to create a unified location for current and future projects to be displayed
- Incorporated responsive design strategies, such as adding a menu bar for smaller screens, to improve viewing the website on all devices
- Created a theme on the website to maintain a consistent design for the user

SKILLS

Languages: C++, Java, Python, R, HTML, CSS, JavaScript, Kotlin, TypeScript, SQL, Verilog
Developer Tools: Git, GCP, AWS, Terraform, Jenkins, PCF, Postman, DB2, VS Code, Visual Studio, Intellij
Frameworks: Apache Beam, Spring, Angular, React, React Native
Libraries: PyTorch, Tensorflow, Flask, NumPy, Matplotlib