Anshul Shah

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Education

Purdue University: Bachelor of Science in Computer Science

August 2022 — May 2025

Concentration in Machine Learning/AI, Minor in Management

West Lafayette, Indiana

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Intro to AI, Analysis of Algorithms, Operating Systems, Database Systems, Systems Programming, Linear Algebra, Data Visualization, Data Mining and Machine Learning

Work Experience

Teaching Assistant (TA)

August 2024 - Present

Purdue Computer Science

West Lafayette, Indiana

- Led weekly Problem-Solving (PSO) sessions for CS 193, guiding students through key concepts such as Unix/Linux command line usage, shell scripting, and version control with Git and GitHub.
- Graded assignments and provided detailed feedback on topics including terminal commands, debugging techniques, and advanced text editing with Vim, ensuring students mastered the course material.

Research Assistant September 2023 – May 2024

Purdue University - Mitch E. Daniels School of Business

West Lafayette, IN

- Used **NLP techniques** on a dataset of 1000+ financial articles to analyze Federal Reserve announcements and their effects on economic indicators like employment and inflation.
- Applied Python and machine learning libraries to extract insights about sentiment analysis and market reactions.

Machine Learning Intern

September 2022 – August 2023

AppUnik - AI Solutions and Predictive Models

Remote

- Developed and deployed an LLM-based recommendation system using fine-tuned models like GPT, delivering
 personalized content suggestions.
- Built end-to-end AI pipelines integrating TensorFlow, PyTorch, and Hugging Face Transformers for text and image-based tasks.

Software Engineering Intern

August 2022 - May 2023

Battelle - Algorithm Development for Biodetection Platform

West Lafayette, IN

- Developed **Python-based hazard detection models**, improving accuracy by **25**% while reducing false positives by 20%.
- Collaborated with cross-functional teams in an AGILE environment, ensuring timely delivery of features.

Projects

Fantasy Premier League AI Chatbot | Python, Flask, SQLite, Selenium, Pandas December 2024 - January 2025

- Developed an AI-powered chatbot to recommend Fantasy Premier League players, leveraging live-scraped data processed with Selenium and Pandas.
- Designed a **relational database** in **SQLite** to store and query player statistics, integrated with **Flask** RESTful APIs for dynamic filtering and recommendations.
- Built robust data pipelines to enable future integration of predictive analytics for player performance modeling and decision-making insights.

Library Management System | Node.js/Express, React, MySQL

February 2024 - April 2024

- Built a scalable full-stack web application to manage over 1,000 library records with secure APIs.
- Used **React** to build responsive UI components and **Node.js** for backend services.

Shell | Lex, Yacc, C++

March 2024 - April 2024

- Designed and implemented a shell with advanced features like piping, I/O redirection, and background processing.
- Improved user interaction by integrating signal handling, process management, environment variable manipulation, and support for conditional statements and loops

Technical Skills

Languages: Python, Java, C++, JavaScript, SQL, NOSQL, TypeScript, R

Frameworks/Libraries: React.js, Node.js, Express.js, TensorFlow, PyTorch, Flask, Bootstrap, Pandas, NumPy, scikit-learn

Tools: Git, Postman, Docker, Jupyter Notebook, AWS (S3, Lambda), Firebase, MongoDB, MySQL

AI/ML Skills: Fine-tuning LLMs, Transformer Models, NLP, Recommender Systems, Time Series Analysis, TensorFlow Hub, OpenAI APIs