Aditya Jadhav

520-4756461 | adityaj2003@gmail.com | github.com | linkedin.com/in | Personal Website

Education

University of Arizona	Tucson, Arizona
Bachelor of Science, Computer Science (Minor: Data Science and Stats)	*January 2021 - December 2024*
GPA: 3.93/4.0	Global Wildcat Scholar

Technical Skills

Proficient Languages: Python, Java, C, SQL JavaScript, Haskell, Lucene
Libraries: Pandas, Matplotlib, NumPy, Scikit-learn
Frameworks: ReactJS , RESTful APIs, NodeJS, Flask, Docker, Git, CMake

Experience

Undergraduate Research Programmer — May 2021 – Jan 2023
University of Arizona - ToMCAT Project | **Python, Linux, Git, JS, Flask, C++**

- Developed a visualisation dashboard to display captured sensor data using wxWidgets, MQTT and C++. Has achieved monitoring of data and various parameters in 50+ tests, works with 4+ devices updating data every 0.1s.
- Built a full-stack Flask application using Python, GoogleSpeech API, HTML, CSS and JavaScript to record entrainment data such as speech, video , LSL synchronised data which is later analysed by a social scientist team.

Undergraduate Research Assistant — Feb 2023 - Present
University of Arizona | **Python, Scikit-learn, NumPy**

- Currently researching under Dr. Chicheng Zhang on active learning using early stopping gradient descent under Tsybakov Noise. Wrote an Active Preconditioned stochastic gradient algorithm Python, Scikit-learn, NumPy

Senior Teaching Assistant - CSc 335 (Object Oriented Programming) — Jan 2022 – Present
University of Arizona | **Java, JavaFX, Maven, Discrete Math**

- Attend class lectures to offer office hours to help students, schedule feedback meetings with students, assist with grading. Work with 12 TAs to achieve stated learning goals in class for the students.

Projects

Chess Website | **React, NodeJS, Express, SQL, AWS**

- Built a website where a 1000 players can play and analyze chess games using Express for backend, NodeJS for StockFish chess engine package and React for frontend, SocketIO for multiplayer and AWS and SQL for user data.
- Infrastructure tasks: built AWS dev environments, configured DB, wrote Python scripts to populate MySQL DB with dummy data for tests.

Hotel Database | **SQL, Java, Unix**

- Built a full fledged Database in SQL and JBDC for a working hotel including Employee management, Bill creation, Rewards and Membership management, Addition/Updation/Deletion of Guests, Employees, Bookings.

Custom Language Compiler | **Python, Assembly**

- Built a full fledged compiler including Lexical Analysis, EBNF grammar, Syntactic Analysis or Parsing, Semantic Analysis, Intermediate Code Generation. Works on the entire pipeline of assembly code generation.
- Parsed 96% of python programs accurately.

IBM Watson Q&A Program using Wikipedia Entries | **Java, Lucene, Maven**

- Built a question answering program like IBM Watson by indexing Wikipedia pages in Lucene, and using Information Retrieval techniques to categorize the most likely answer for each question.
- Improved accuracy from 15% for the barebone implementation to 30% using various IR and NLP Techniques.

Relevant Coursework

- Unix and System Programming
- Deep Learning
- Text Retrieval and Web Search
- Database Design
- Computer Networking
- Web Development
- Data Structures and Algorithms
- Computer Organisation
- Software Development and OOP
- Compilers
- Cloud Computing
- Functional Programming