Aditya Jadhav

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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++. Achieves monitoring of data and various parameters in 50+ tests, with 2 devices updating data every few ms.
- Built a 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. Developing an Active Preconditioned stochastic gradient algorithm in Python, Scikit-learn, NumPy.

Senior Teaching Assistant - CSc 335 (Object Oriented Programming)   Jan 2022 – Present
University of Arizona | **Java, JavaFX, Maven, Discrete Math**
- Schedule feedback meetings, assist with grading, hold office hours, develop coursework, help in training new TAs.

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, React for frontend, SocketIO for multiplayer and AWS RDS/SQL for user data.
- Infrastructure tasks: built AWS dev environments, configured DB, wrote Python scripts to populate postgresql DB with dummy data for tests.

Hotel Database | **SQL, Java, Unix**
- Built a Hotel Database in SQL and JBDC for Employee management, Bill creation, Rewards and Membership management, Addition/Updation/Deletion of Guests, Employees, Bookings.

Custom Language Compiler | **Python, Assembly**
- Created 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 custom language 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 35% 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