UJWAL JOSHI

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Education

University of Houston — **Expected December 2024**
Bachelor of Science in Computer Science, Minor in Mathematics — *GPA: 3.66*

Awards

Dean's List (Fall 2021, Spring 2023, Fall 2023), Dean's Distinguished List (Spring 2022)

Relevant Coursework

Data Structures, Algorithms, Operating Systems, Databases, Machine Learning, Data Science

Technical Skills

Languages: Python, R, Java, C++, HTML/CSS, JavaScript, SQL
Technologies/Frameworks: Linux, ReactJS, TailwindCSS, Pandas, NumPy, PostgreSQL, MongoDB

Projects

chatAIr | *Amadeus, RapidAPI, ExpressJS, React Native* — **February 2024**
- Developed a mobile application with **React Native** which simplifies flight and ticket price searches, earning first-place out of **20 teams** for innovation and accessibility in the PROS company track at the CodeRED Genesis hackathon.
- Integrated APIs from **Amadeus** and **Rapid API**, improving data retrieval speeds by **40%**, leading to faster and accessible flight search results for users.
- Leveraged advanced **Natural Language Processing** techniques to accurately interpret user queries, resulting in a significant **30%** increase in the efficiency of retrieving relevant flight information customized to their specifications.

Traffic Volume Trends Machine Learning Model | *R* — **December 2023**
- Conducted comprehensive analysis of interstate traffic, identifying and quantifying key factors pivotal to traffic volume.
- Leveraged advanced statistical models, such as linear regression and random forests, resulting in a **50%** enhancement in predictive model accuracy.
- Implemented advanced data cleaning and analysis techniques, leading to a **40%** reduction in prediction errors.

Minimalist Python Interpreter | *C++, Python* — **November - December 2022**
- Developed a Python interpreter for small-scale programs executing **13** Python scripts with **70%** accuracy.
- Successfully implemented **5** core features: variable assignments, lists, arithmetic expressions, conditionals and console output.
- Utilized advanced data structures and algorithms such as the Shunting-Yard Algorithm, and Abstract Syntax Trees resulting in a **50%** improvement of script performance.

Fluid Dynamics Serial Receiver | *Java, C++* — **April 2020**
- Collaborated a team of **2** to create a desktop application for collecting and displaying data from fluid samples.
- Developed a Java Swing application to display the output of **3** sensors detecting chemical content in fluid samples.
- Implemented a CSV file exporter for data to be analyzed in programs like MS Excel reducing data processing time by **20%**

Involvement

CougarCS — **August 2023 – Present**
Computer Science Tutor — *Houston, Texas*
- Guided **11+** students on coding assignments, projects, and lab exercises on a **weekly basis**.
- Increased student exam scores by an average of **12%** by collaborating with a team of **30** tutors to centrally plan customized lesson plans.
- Conducted one-on-one and group tutoring sessions for students enrolled in Computer Science courses such as Data Structures.