USSAMA MUSTAFA

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ussarata.github.io/personal-portfolio

Skills

Languages: Python, C/C++, JavaScript, Java
Technologies & Skills: React.js, Django, Flask, TensorFlow, Pandas, SQL, Git, SCRUM, Agile,

Professional Experience

Data Analysis Teaching Assistant
College of Wooster – *Computational Sciences Department* **Fall 2022**

- Assisted in teaching SQL-based data analysis, covering statistical concepts such as regression
- Organized engaging workshops, fostering practical data analysis and interpretation skills

Software Engineering Intern
Goodyear Tire & Rubber Company – *Airless Tires Team* **Summer 2022**

- Built a comprehensive Python application for precise computation of airless tire properties
- Improved readability, user experience, and runtime efficiency, achieving a 300% acceleration
- Implemented class object serialization, automatic plot generation, and a Pytest suite

Website Developer
College of Wooster – *Computational Sciences Department* **Winter 2021**

- Created an interactive course website with Django to facilitate assignment tracking and accessibility
- Earned commendations from faculty for optimizing course content and student experience

Projects

Illustrated Story Generation **Feb 2023**

- Built an interface combining text and art ML models for the generation of illustrated storybooks
- Leveraged transfer learning with transformers to significantly enhance model performance
- Wrote a 100+ page paper covering the process, results, and findings of the project

Ramble – Full Stack **Oct 2022**

- Developed an open-source forum, drawing inspiration from Twitter and Tumblr, using React.js
- Successfully integrated authentication, relational databases, CRUD functionality and UI principles
- Employed agile methodologies to prototype and iterate features, reducing development time by 20%

Pyo Melody Generation **July 2022**

- Implemented genetic algorithms for melody generation using Pyo
- Transformed audio into binary genome encodings to produce captivating melodies
- Engineered a personalized recommendation system for generating user-tailored melodies

Education

The College of Wooster Aug 2019 - May 2023
Bachelor of Computer Science & Mathematics

- **Departmental Honors / Foster Prize in Mathematics / Dean's List**
- **Courses:** OOP in C++, Data Structures and Algorithms, Operating Systems, Software Engineering, Numerical Analysis, Machine Intelligence, Data Analysis