USSAMA MUSTAFA

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ussarata.github.io/personal-portfolio

Skills

Languages: Python, C/C++, JavaScript

Technologies & Skills: Django, Flask, React.js, Pytorch, Pandas, Numpy, MySQL, Git, SCRUM, Agile

Professional Experience

OOP & ADT Teaching Assistant

College of Wooster - Computational Sciences Department

Fall 2022

- Assisted in teaching data structures and algorithms to students and graded their work
- Helped students build programs applying object-oriented programming and abstract data types in C++

Software Engineering Intern

Goodyear Tire & Rubber Company - Airless Tires Team

Summer 2022

- Built a comprehensive Python application to compute physical attributes of airless tires
- Improved readability and accuracy of computations and accelerated the runtime by over 300%
- · Implemented class object serialization, automatic generation of plots, and a Pytest suite

Website Developer

College of Wooster - Computational Sciences Department

Winter 2021

- · Created a course website using Django to help students keep track of assignments and lectures
- · Received feedback from faculty to improve course content and student experience

Projects

Illustrated Story Generation

Feb 2023

- Built a user interface linking text and art ML models to generate illustrated stories
- · Used transfer learning on transformers to improve the performance of the models
- · Created the backend using Django and Firebase, and the frontend using React is and Gradio

Ramble - Full Stack

Oct 2022

- Built a responsive open-source forum inspired by Twitter and Tumblr using React.js and CSS
- Implemented authentication, real-time databases and CRUD and UI principles

Pyo Melody Generation

July 2022

- Built a melody generation software using Pyo and genetic algorithms
- Converted sounds to binary genome encodings to output melodies
- Implemented a recommendation system to generate melodies which cater to user preferences

Education

The College of Wooster

Aug 2019 - May 2023

Bachelor of Computer Science & Mathematics

- · Departmental Honors
- · Foster Prize in Mathematics
- Courses: OOP in C++, Data Structures and Algorithms, OS, Software Engineering, Numerical Analysis, Machine Intelligence, Data Analysis