Joseph Hughes

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Personal Projects

Automated Twitter Account - Creator

- Leveraged Python in conjunction with the Twitter API to establish and manage an automated Twitter account.
- Daily dissemination of weather updates and enthusiastic game-day wishes to sports teams.
- No longer active due to Twitter API change. Github here.

Spotify Location-Based Recommendations - Co-Creator

- Developed a location-based music upload feature, enabling users to associate music with specific geographical locations.
- Engineered a recommendation system that suggests songs and playlists based on proximity to user-uploaded content.
- Utilized **Python** and **Streamlit** to architect an intuitive user interface.
- Executed **SQLite** database queries tailored to user location data, enhancing the app's personalized music recommendations.
- GitHub link here.

Al Snake - Creator

- Developed an AI agent proficient in playing the classic game of Snake, harnessing the power of **Python** and **PyTorch**.
- Successfully applied Q-Learning techniques, achieving an impressive high score of 94 within a limited span of 2,000 trials
- Github link here

Calculus Ninja Game - Co-Creator

- Designed and crafted an interactive video game leveraging Javascript and p5.js
- Engineered a comprehensive game engine featuring collision detection, dynamic enemy tracking mechanics, and interactive controls
- Github link here

Skills At a Glance:

Python Twitter API Weather API

Skills At A Glance:

Python Streamlit **SQLite**

Skills At A Glance:

Python PyTorch

Skills At A Glance:

Javascript p5.js

Leadership Experience

MSU AR/VR Club- President and Founder

Founded to promote education and development of emerging XR technology.

East Lansing, MI

- Aug. 2023-Current
- Initiated hands-on projects and workshops and fostered a community for applying classroom knowledge.
- Organized weekly meetings and bi-weekly events to give members opportunities to develop their skills.

Education

Michigan State University

Bachelor of Science in Computer Science

East Lansing, MI

August 2022 - May 2025

- GPA: 4.0, Dean's List
- Relevant Coursework: Discrete Structures (4.0), Data Structures and Algorithms (4.0), Computer Organizations and Architecture(4.0), Honors Linear Algebra(4.0)

Technical Skills:

Python(3yrs), C++(2yrs), Git, Dart(1yr), Flutter(1yr), SQLite, Javascript(1yr), Android Studio, Java(1yr), LaTeX, Blender