

Jotham Teshome

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EDUCATION

Michigan State University

Jan 2023 – April 2024

Master of Science, Computer Science

GPA: 3.85

- Relevant Coursework: Natural Language Processing, Computer Vision, Pattern Recognition, Deep Learning, Algorithmic Graph Theory, Distributed Systems

Michigan State University

Sep 2019 – Dec 2022

Bachelor of Science, Computer Science

GPA: 3.69

Minor, Business

- Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, Algorithm Engineering, Web Application Development, Database Systems

PROJECTS

Portfolio Website *React.js, Bootstrap*

May 2024

- Designed a responsive portfolio website using **React.js** to display my experience and various projects
- Optimized performance through static site generation using **Next.js** to ensure a quality user experience
- Integrated a modern design using **Bootstrap** an aesthetically pleasing and polished user interface
- Created dynamic animations using **Framer Motion** to enhance interactivity and visual appeal

Classification of Pokémon Sprites *Python, OpenCV, PyTorch*

Sep 2023 – Dec 2023

- Collaborated with peers to design a **CNN** model using **PyTorch** to classify Pokémon from their sprite images
- Preprocessed battle images using **OpenCV** for edge detection and shape analysis to identify and isolate Pokémon
- Achieved a classification accuracy of **86%** on preprocessed Pokémon sprite images

Predicting NFL Betting Odds *Python, BeautifulSoup, Scikit-learn, PyTorch*

Sep 2023 – Dec 2023

- Cooperated with others to design various models using **Scikit-learn** and **PyTorch** to predict NFL game point spreads
- Developed a dataset using **BeautifulSoup** to scrape game data from Pro Football Reference to use for model training
- Achieved results comparable to sportsbook predictions, with an MSE of **193.8** and R^2 of **0.137** with our neural network

Identifying and Removing Toxic Comments *Python, TensorFlow*

Jan 2023 – April 2023

- Partnered with a peer to design an **RNN** model using **TensorFlow** to identify toxicity in online comments
- Generated subword embeddings using **FastText** to better detect potential variations of toxic words in comments
- Achieved a word-level classification accuracy of **91%** using trigram embeddings in our multi-appearance word model
- Developed an automated system to censor toxic words to improve the efficiency of real-time content moderation

EXPERIENCE

MSU College of Engineering *Flask, HTML, CSS, JavaScript*

Sep 2023 – April 2024

Graduate Teaching Assistant

- Evaluated assignments to uphold rigorous academic standards in the Web Application Development course
- Assisted students with helpful insight on **GitLab** by describing the uses for **HTML**, **CSS**, and **JavaScript** in **front-end** design, including topics such as responsive sizing and dynamic retrieval of data
- Improved students' understanding of **Flask** for **back-end** development by **7%** through hosting regularly scheduled office hour sessions

MSU Federal Credit Union *Flutter, Dart, SQL*

Sep 2022 – Dec 2022

Software Engineering Intern

- Collaborated with colleagues to enhance MSU Federal Credit Union's mobile banking apps using **Flutter**, **Dart**, and **SQL**
- Designed an aesthetically pleasing user interface using **Flutter** and **Dart** to enhance customers' banking experience
- Implemented a modern peer-to-peer transfer system featuring usernames, QR codes, and NFC to increase usability
- Created a system using **Google Places API** to notify users of deals at local businesses based on shopping patterns

SKILLS

- Python, C++, C, JavaScript, Dart, Node.js, React.js, Flask, Flutter, CSS, HTML, Bootstrap, OpenCV, PyTorch, TensorFlow