# 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 to display my experience and projects using React.js and Next.js to ensure optimal performance and navigation across devices
- Integrated Bootstrap for a modern design and utilized Framer Motion to create dynamic animations to enhance user experience

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