

JOTHAM TESHOME

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EDUCATION

Michigan State University

January 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

September 2019 - December 2022

Bachelor of Science, Computer Science, Minor in Business

GPA: 3.69

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

WORK EXPERIENCE

Stefanini Group - Purolator Apps SCP Intern

April 2025 - Present

- Refactored legacy C# **AI** chatbot logic into modular Python functions, enhancing code maintainability and enabling easier future development
- Engineered and deployed **AWS Lambda** functions to expose business logic as scalable, reusable **APIs** across **chatbot** platforms
- Automated the generation of **SAP** Business Process Documents (BPDs) using Python **APIs**, reducing manual workload and increasing consistency
- Analyzed and translated complex monolithic codebases to ensure accurate cross-language functionality and alignment with business requirements

Versive - Machine Learning Engineer (Project-Based)

June 2024 - December 2024

- Developed **CNN**-based vision models using **PyTorch** to detect tumors in MRI scans, improving diagnostic accuracy and assisting doctors in providing patients with better outcomes
- Leveraged transfer learning with pretrained models (**ImageNet**) to enhance model precision and reduce training time
- Utilized **YOLOv8** for image segmentation to precisely localize tumor regions within MRI scans, leading to a **10%** increase in detection accuracy by focusing on relevant areas

Michigan State University - Graduate Teaching Assistant

August 2023 - May 2024

- 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

Versive - Software Development Engineer (Project-Based)

January 2023 - July 2023

- Developed a secure web application for hospitals powered by **AWS services** (Amplify, RDS), allowing doctors to verify tumors detected in patient MRI scans
- Implemented encryption, role-based access control, and multifactor authentication to ensure patient data security
- Designed backend architecture using **Flask** to manage communications between **MySQL** database and **React** front-end

MSU Federal Credit Union - Software Development Engineer Intern

September 2022 - December 2022

- 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

PROJECTS

Identifying and Removing Toxic Comments, Python, TensorFlow

- Partnered with a peer to design an **RNN** model using **TensorFlow** for detecting 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

Portfolio Website, NodeJS, NextJS, ReactJS, Bootstrap, JavaScript

- Designed a responsive portfolio website using **ReactJS** to display my experience and various projects
- Optimized performance through static site generation using **NextJS** to ensure a quality user experience
- Integrated a modern design using **Bootstrap** an aesthetically pleasing and polished user interface

SKILLS

Programming Languages:

Python, C, C++, JavaScript, HTML, CSS, SQL, Dart

Frameworks:

PyTorch, TensorFlow, Scikit-learn, OpenCV, React, Node, NextJS, Flask, Flutter, Bootstrap

Tools:

AWS (Lambda, API Gateway, DynamoDB, Amplify, EC2, RDS, Route 53), GCP, Git, Docker

Environments/Operating Systems:

Linux, Unix, Windows, MacOS, Bash, Terminal