

# Jotham Teshome

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## Education

<b>Michigan State University</b>	Jan 2023 – April 2024
Master of Science, Computer Science	GPA: 3.85
- Coursework: <i>Natural Language Processing, Computer Vision, Pattern Recognition, Deep Learning, Algorithmic Graph Theory, Distributed Systems</i>	
<b>Michigan State University</b>	Sep 2019 – Dec 2022
Bachelor of Science, Computer Science	GPA: 3.69
Minor, Business	

## Experience

<b>MSU College of Engineering</b>	Sep 2023 – April 2024
Graduate Teaching Assistant	
- Evaluated assignments to uphold rigorous academic standards in the Web Application Development course	
- Provided students with helpful insight on <b>GitLab</b> by describing the uses for <b>HTML</b> , <b>CSS</b> , and <b>JavaScript</b> in <b>front-end</b> design, including topics such as responsive sizing and dynamic retrieval of data	
- Improved students' understanding of <b>Flask</b> for <b>back-end</b> development by <b>7%</b> through hosting regularly scheduled office hour sessions	
<b>MSU Federal Credit Union</b>	Sep 2022 – Dec 2022
Software Engineering Intern	
- Developed a software project, primarily using <b>Flutter</b> , <b>Dart</b> , and the <b>iOS SDK</b> , for a customer by working with a team of six students to enhance customers' banking experience	
- Designed and implemented <u>Digital Transformation of Member Data</u> by working closely with the customer to bring their vision for the product to life	
<b>NSF REU Project</b>	Sep 2022 – Dec 2022
Undergraduate Researcher	
- Analyzed various research papers to better develop an understanding of <b>optical wireless communication</b>	
- Utilized <b>TinkerCAD</b> for <b>3D modeling</b> to develop a 4 x 4 x 4 3D "QR code" that could be used for groundbreaking research into <b>underwater optical identification</b>	
- Developed an Android application written in <b>Kotlin</b> to scan a live camera feed, detect objects, and display an associated description of the object on the screen	

## Projects

<b>Home Server Website</b> <i>HTML, CSS, JavaScript, Flask</i>	Dec 2023 – Feb 2024
- Designed a responsive web interface using <b>HTML</b> and <b>CSS</b> to easily access content from a personal web server from any device connected to the network	
- Built a back-end web application using <b>Flask</b> to facilitate uploading and serving content from a personal server	
- Significantly improved website performance through the use of <b>jQuery ajax</b> calls to retrieve content from the server and the use of <b>JavaScript</b> to dynamically render content as it is retrieved	
<b>Classification of Pokémon Sprites</b> <i>Python, Computer Vision</i>	Sep 2023 – Dec 2023
- Worked with a team of four students to design and implement a <b>convolutional neural network</b> model to successfully classify Pokémon sprites within a set of images	
- Leveraged image processing techniques as well as machine learning techniques to classify sprites from battle images with up to <b>86%</b> accuracy	
<b>Identifying and Removing Toxic Comments</b> <i>Python, NLP</i>	Jan 2023 – April 2023
- Implemented a <b>recurrent neural network</b> model trained on labeled comments from the Civil Comments dataset to identify toxicity and non-toxic content online	
- Used a multi-step approach, including a secondary <b>long short-term memory neural network</b> , to classify words for toxicity within sentences with up to <b>91%</b> accuracy	

## Skills

- <b>Programming Languages:</b>	Python, C++, C, JavaScript, Dart
- <b>User Interface:</b>	HTML, CSS
- <b>APIs/SDKs/Frameworks:</b>	Flask, Flutter, Vue.js, Node.js, iOS SDK
- <b>Languages:</b>	English (fluent), French (novice)