

Tyler Faulkner

Contact



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Education

Computer Science, B.S.
Mathematics Minor

GPA: 3.86

Milwaukee School of Engineering
Graduating May 2023

Skills

Python, JavaScript, C++, Java
SQL, Postgres, MongoDB
React, Electron, Flask, TestPlan
Algorithms and Data Structures
Machine Learning
Statistics and Calculus
Data Analysis and Modeling
High Power Computing
Teamwork and Communication

Relevant Courses

Machine Learning Productions
Deep Learning
Algorithms
Probability and Statistics
Database Systems
Web Application Development
Machine Learning

Interests

Artificial Intelligence Development
Web Development
Video Game Development
Live Music

Experience

Software Engineering Intern, Cognex Corporation

April 2022 - September 2022

- Developed new utilities to automate firmware uploads on devices for **Python** tests.
- Expanded operating system functionality for embedded devices using **Yocto**.
- Created new tools to improve the ease of use on device applications.
- Implemented automated tests in **Python** with **TestPlan** for communication protocols on production devices.
- Diagnosed and resolved bugs in production code written in **C++**.
- Operated in both **Scrum** and **Kanban** environments.

Online Private Instructor, iD Tech

May 2021 - May 2022

- Provided over 250 personalized lessons to over 70 students on programming and game development.
- Taught core programming lessons in **Python** and **Java**.

Projects

Senior Design Project, Team of 5

Develop an interactive display to educate users on machine learning and supercomputing and to demonstrate uses for artificial intelligence in various fields.

- Created a web application using **JavaScript** with **React** and **Electron** and a machine learning backend in **Python** and **Flask**.
- Engineered user navigation through hand recognition using computer vision machine learning models with **MediaPipe**.
- Trained and evaluated multiple machine learning models for human emotion prediction using **TensorFlow** and **Keras**.
- Developed a conversational agent to respond to questions about artificial intelligence.
- Integrated Stable Diffusion to demonstrate latent diffusion networks.

Machine Learning Productions Python Project, Team of 3

Design a spam classification machine learning REST service with the ability to store and batch process emails.

- Evaluated machine learning models for spam email classification using **Scikit-learn**.
- Used **Flask** to create an API endpoint for the service.
- Stored received emails using **Postgres** with **SQL**.
- Created a periodic collection service to store logs in **Minio**.
- Utilized **Apache Spark** with **Scala** to batch data for offline model development
- Implemented periodic retraining of model to avoid errors due to data distribution shift.