Jacob Caurdy

Computer Science Engineer

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Objective

Senior computer science engineering major with a diverse skillset interested in machine learning, data engineering, data science and analytical full-time roles.

Education

Michigan State University: Expected Graduation - May 2022 | GPA: 3.85
- Bachelor of Science in **Computer Science Engineering** – **Cognitive Science Minor – Honors College**
- Coursework: CSE404 Machine Learning, CSE891 Computational Foundations of AI, CSE480 Databases

Technical University of Madrid: Study Abroad – Summer 2019

Experience

Mars Inc: Data Analytics Intern: Supply Chain Analytics – (May 2021: August 2021)
- Created an automatic customer support response application which could save associates 250+ hours/week in answering emails from retailer customers
- Written in **Python** using a **90% accurate NLP multi-class text classification** model with a **Dash** front-end
- The application classified emails, extracted key information, retrieved related information from databases (Power BI, SAP, etc.) and then created an automatic draft response which the user could review

CSE 331: Data Structures & Algorithms: Teaching Assistant / Project Co-Lead – (January 2021: Present)
- Oversaw the development of unique project curriculum each semester to help students understand the implementation and application of all basic data structures and associated algorithms in **Python**
- Created coding challenge assignments around Hash Tables and Path finding algorithms

DTE Energy: Instrument & Control Engineering Intern – (June 2020: August 2020)
- Worked with a team of 3 interns to collect, wrangle and visualize data from sensors in the plant into an excel file so it could be charted over time enabling engineers to make safer maintenance decisions

Fraunhofer USA CCD: Systems Engineering Intern – (August 2018: May 2020)
- Communicated with software engineers to create an HMI for automated process control and recipe loading using **LabVIEW** (logic/interface) with **TwinCAT** (PLC control) for a next generation diamond system
- Achieved plasma in multiple systems leading to thin film deposition runs using HMI software

Projects

Deep Neural Network Cat Image Classifier: **Python** - https://www.coursera.org/specializations/deep-learning
- Wrote a DNN model from scratch using **NumPy.** Trained on a binary cat/non-cat image dataset and achieved an 80% test set accuracy without regularization or dropout.

Discord Chat Bot: **JavaScript** - Personal
- Created a chat-bot with dynamic menu system that responds to message, user entrance and exit events

Balloon's Tower Defense: **C++** - CSE 335: OOP Software Development
- Developed a simple version of BTD among a team of 5 students from scratch. Received a 100%

Skills

Languages| Python, C++, SQL, HTML, CSS, JavaScript, MATLAB, Git, GDB

Technologies| Linux, Azure Machine Learning, Dev-Ops, CLI/Bash

Python Data Analytic Libraries| NLTK, Spacy, SkLearn, Keras, PyTorch, Pandas, Matplotlib, Dash

Leadership

MSU Rugby Club: Vice President
- Oversee all branches of the club including recruitment, marketing, financial, and social
- Maintain michiganstaterugby.com, a WordPress hosted site written in **HTML**, **CSS,** and **JavaScript**

Hobbies

Gaming (FPS, Sports, Rocket League), Working out, Reading (Sci-Fi, Philosophy, Psychology, CogSci)