Jacob Maxson

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Education

Ohio State University Expected Graduation: May 2022
Major: BS Computer Science & Engineering GPA: 3.9
Minor: Business Dean's List

Technical Skills

Programming: Java, C, C++, C#, Python
Web Development: HTML, CSS, JavaScript, jQuery, ReactJS
Miscellaneous: Xamarin.Forms, Unity, Linux, ASP.NET Core, SQL, MATLAB, Azure

Projects

Utility Pole Evaluator: November 2020

- Hackathon project worked on with a team of 4. Coded an API in Python to evaluate the safety of utility poles in Columbus. Utilized metadata and image recognition software to calculate how much a pole was leaning and displayed this info in real time using the Google Maps API. Created an air drone AI to automatically travel from pole to pole, and simulated it using Microsoft AirSim. Entered and won AEP's hackathon challenge.

Character Recognition: March 2021—May 2021

- Developed a custom machine learning algorithm featuring dynamic neural network structures. Applied the algorithm to the EMNIST character dataset, which consists of 47 total characters, including digits as well as uppercase and lowercase letters. Initial training resulted in a 75% classification accuracy, with further improvements expected.

Chess AI: November 2019

- Hackathon project worked on in a team of 4. Generated tree of possible game states, using an alpha beta search algorithm and iterative deepening to traverse the tree. Tabulation hashing and pruning algorithms increased average performance by over 100x. AI is estimated to play at an Elo level of a chess Master rating.

March Madness Predictor: February 2021—March 2021

- Retrieved historical statistics on college basketball teams and performed data analysis with neural networks to predict a march madness bracket. Model was tested on both previous and future tournament games, yielding an 80% accuracy on predictions. Coded in Python.

YouTube Playlist Randomizer: June 2020—July 2020

- Created a website that fixed the broken "shuffle" feature on YouTube. Developed a back-end API that generates and parses a playlist source page to retrieve a list of videos before randomizing them. Multiple playlists can be appended and mixed together, even if they come from different users. Coded with C#, JavaScript & jQuery. Deployed to Azure.

Personal Website: October 2019—November 2019

- Designed a mobile-friendly personal website from scratch. Website features multiple themes the user can select from, each incorporating their own unique background effects. Made with HTML, CSS, & JavaScript.

Other Experience

Shadowing May 2018

- Shadowed a Lead Applications Developer at Kent State University.
- Gained 30+ hours of field research experience focused on web development.