# Jacob Maxson

35455 Michael Dr, Solon, OH 44139 | 216-712-2178 | jtmaxson18@gmail.com | Portfolio: rocksrock18.github.io

## 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

### 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. Created back-end in C#, deploying to Azure. Designed front-end with React & jQuery.

### Schedule Planner:                                                          May 2020—Present

- Developed a schedule planner app using Xamarin. Can dynamically create, edit, and customize events. Data is serialized and stored to maintain the user's state. Compatible with Android and iOS devices.

### 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.

### 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.

### Penny Football:                                                            July 2020—Present

- Coded a new game called "Penny Football" in Unity. Game utilizes vector math and collision detection to calculate projected paths of objects in real time. Allows for quality and resolution options that are automatically updated based on the user's system. Runs at 300+ FPS on the highest settings. Written in C#.

### March Madness Predictor:                                          December 2019—Present

- Implemented a web scraper to retrieve statistics of college basketball teams. Linear regression and neural networks were used to predict a march madness bracket based on the statistics of the teams competing. Coded in Python.

### Robot:                                                                    January 2019—May 2019

- Constructed and coded a robot to navigate an obstacle course. Modeled complete robot in Solidworks. Entered the official OSU Robot Competition and placed 3rd overall, receiving a cash prize. Coded in C++.

## 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.