Richard Guan

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EDUCATION

University of Michigan **Ann Arbor, MI**
Bachelor of Science in Engineering - Computer Science **Expected: April 2021**
GPA: 4.0/4.0
Classes: Data Structures, Introduction to Combinatorics, Linear Algebra, Accelerated Introduction to Programming, Classical Mechanics

TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript, HTML/CSS
Other Technologies: Django, React, Flask, Electron, Unix, Windows, Android, Git

PROJECT EXPERIENCE

University of Michigan Solar Car Team Ann Arbor, MI
- *Software/Strategy Team* September 2018 - Present

- Developed functionality for multiple sessions of the Python/Django-based web game WarGames to be played at once, and for multiple World Solar Challenge routes to be loaded in order to better train team strategists for the race
- Implemented the above features by refactoring the database and Django/Python REST API of the 10,000 line WarGames backend and altering the WarGames UI using JavaScript
- Created an interactive Electron-based desktop app written in JavaScript for Solar Car telemetry to streamline the decision making process of team strategists

SnapCal Web App — snapcal.richardguan.me Ann Arbor, MI
- *Project Creator* September 2018 - January 2019

- Designed a web app using Python/Django and JavaScript with jQuery that uses computer vision to interpret text from physical fliers to streamline the user experience of adding events to virtual calendars
- Deployed an alpha version of SnapCal with 80% photo recognition accuracy on Google Cloud Platform

Laser Tag Android App Ann Arbor, MI
- *MHacks 11 Project Member* October 2018

- Developed an Android app with Kotlin and Android Studio in 36 hours during MHacks 11 to play laser tag in real life using just a phone
- Applied OpenCV in Java to enable the computer vision the app needed to allow players to "tag" each other by pointing their camera at their opponent's screen and tapping the "shoot" button

WORK EXPERIENCE

180 Degrees Consulting Ann Arbor, MI
- *Business Analyst* January 2019 - Present

- Led UI/UX research efforts for Kiva to improve user retention on their crowd-vetting platform by 3%
- Wireframed two designs for Kiva's crowdvetting platform in Adobe XD to present to our client, Kiva

Cincinnati Children's Hospital Medical Center Cincinnati, OH
- *Research Intern* June 2017 - August 2017

- Created a computer vision support vector machine written in Python with Numpy and Scikit Learn to diagnose stroke from MRIs with 77% accuracy
- Statistically analyzed fMRI data with MATLAB to extract information to be used in a PhD candidate's deep learning neural network to diagnose autism

ADDITIONAL

- Selected for MPowered's Startup High School team to organize a pitch competition that provided access to mentors, resources, and prize money for over 30 high schoolers in Michigan
- As president of Fix N' Give, led a team of 14 people and organized a Computer and Accessories Drive event, collecting over 80 computers from the community in order to donate to local schools in need