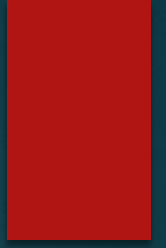
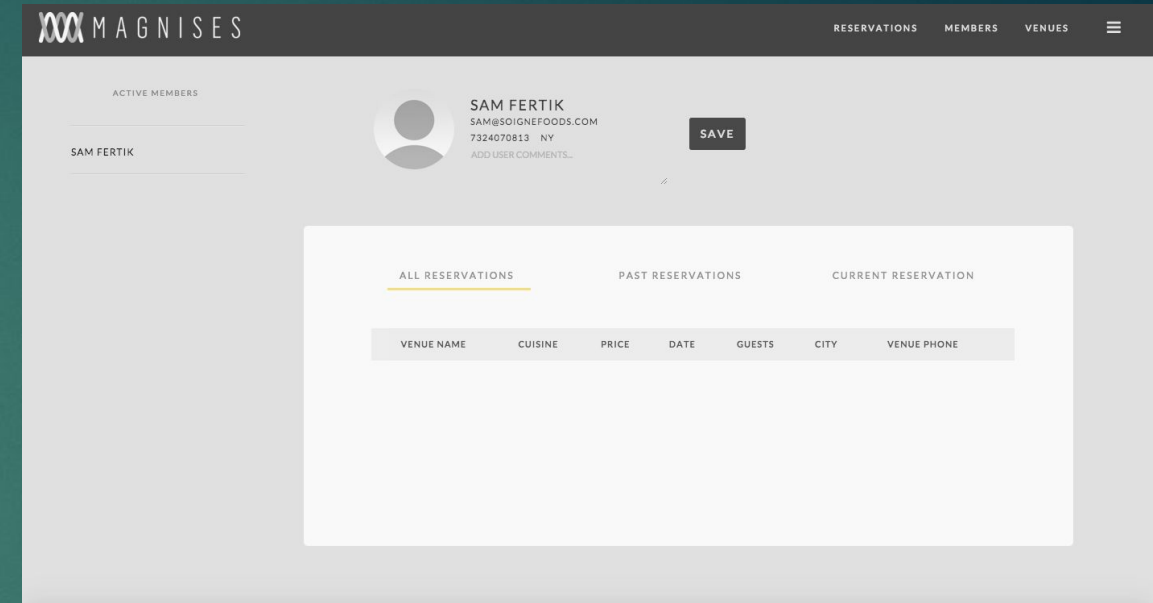
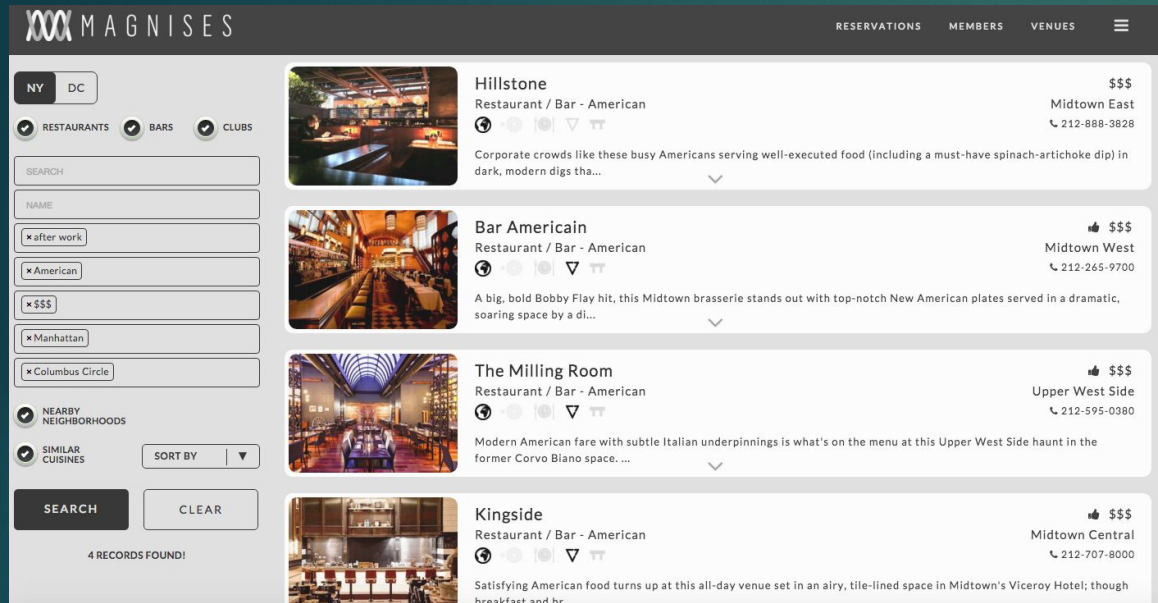


Avery Rubin

PROJECTS



Magnises – Web Developer



- Led a team of interns with the task of creating an employee website using JavaScript, HTML, PHP, CSS, and JQuery.
- The website served as a search engine for the company concierge service to look up restaurants based on customer preference.
- It also kept track of past user reservations and kept a contact card in the database.

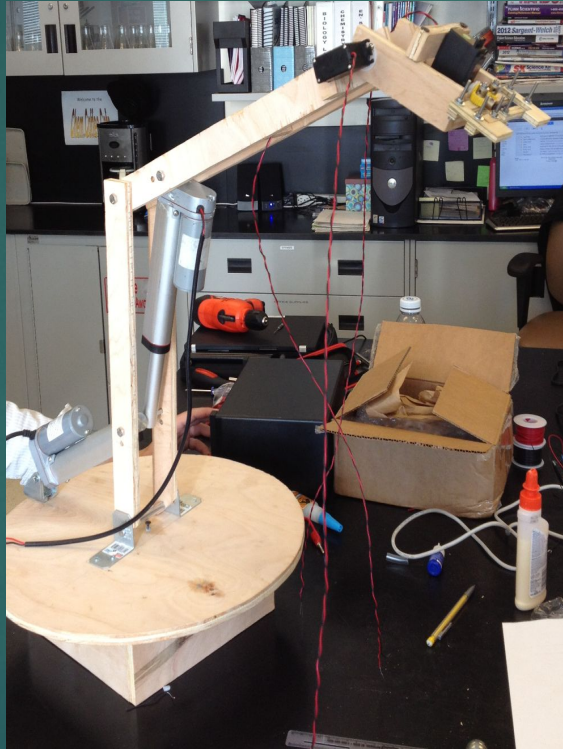
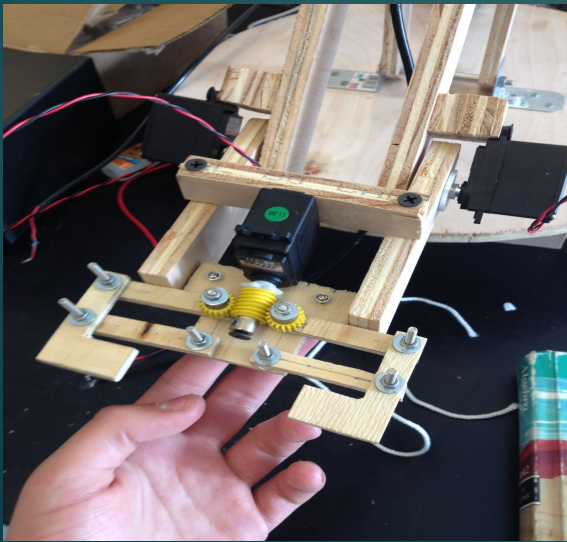
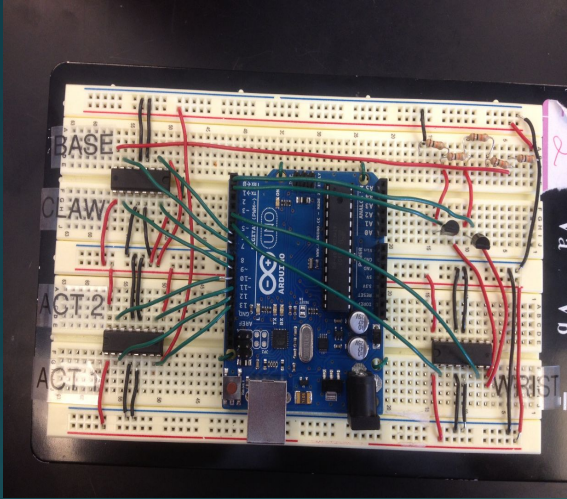
MHybrid – Hybrid System Management



- Using C++, My team and I were tasked with managing the hybrid system of our race car.
- Considering all cruising conditions, I was able to optimize both the cars performance and fuel efficiency.
- I was also able to implement a basic torque vectoring system for the car using two separate electric motors powering the front wheels of the car
- Our car placed 3rd in the national competition.



Robotic Arm – Designer & Programmer



- Built and programmed an autonomous robotic arm using Arduino to aid in the disposal of harmful chemicals in a laboratory setting.
- The robotic arm utilized multiple servo motors, 2 linear actuators, a parallax distance sensor, and 3 custom gears.
- The robotic arm was able to locate objects within a 1.5 foot radius, pick them up, and place them 180 degrees in the opposite direction based off an algorithm I programmed.
- Placed 2nd place in LISEF Science Fair.

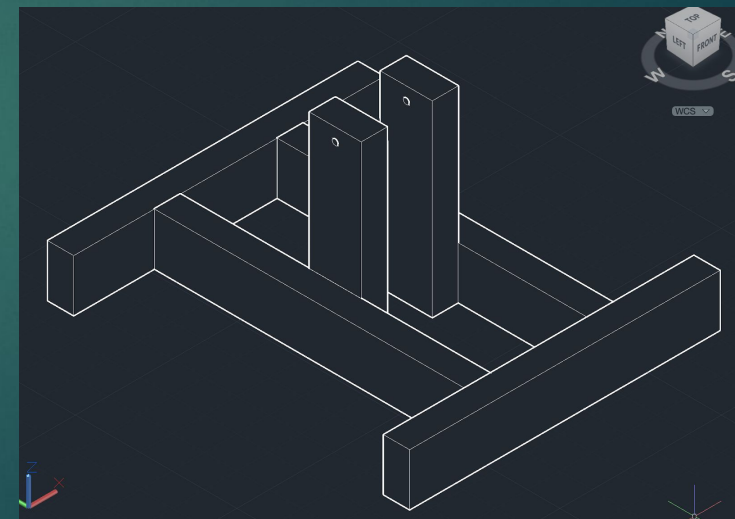
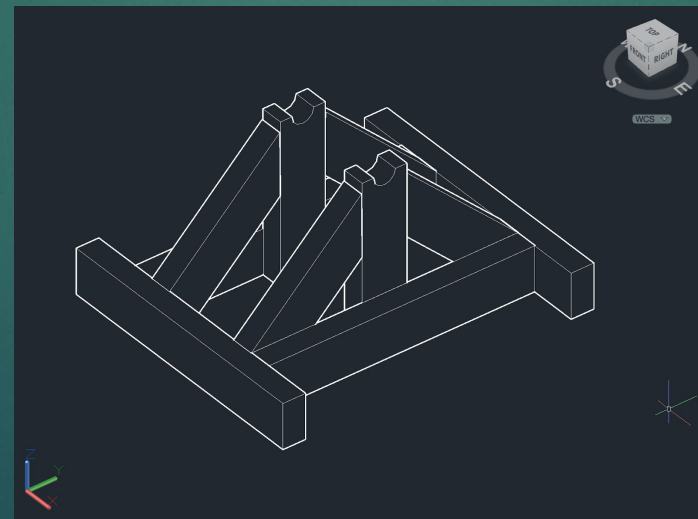
Self Adjusting Umbrella – Patent Pending



- Designed and built a beach umbrella which automatically adjusts the canopy based off the position of the sun in the sky.
- Using an Arduino, GPS chip, real time clock, and 2 linear actuators I programmed an algorithm which takes your GPS coordinates, date, and time as inputs and returns the angular position of the sun in the sky.
- Currently patent pending.

Power Generating Bike – Team Leader

- As part of an engineering course my team and I were tasked with generating enough electricity to power a microcontroller, using human power generation and on a budget of only \$80.
- Designed a truss system using CAD to suspend a bike and added an extra chain to a small magnetic generator setup.
- Our team was given the 1st place award.



SeekVehic - IOS Developer

- Tasked with developing the backend of a new taxi hailing iPhone application. This app brought the convenience of having an application run your taxi service to local taxi companies.
- Was the lead representative for all University of Michigan interns.
- Our goal to release our beta version within the deadline was reached and the app was sent in for review.

Current Projects

Ctrading – Founder

- In my free time with two fellow students, I design and program possible high frequency trading algorithms in C++ to be used for "day-trading"
- Our goal is to be able to test at least 2 algorithm's by this summer to present to possible investors.