Seth A. Fancher

Bridgman, MI 49106 | sethafancher@gmail.com | sethafancher.github.io | (269) 363-5538

EDUCATION

University of Michigan, College of Engineering - Ann Arbor, MI *Expected Graduation May 2023*

- B.S.E. in Computer Science and Engineering | Cumulative GPA: 3.95
- Relevant Coursework: Data Structures and Algorithms (Currently enrolled), Programming and Introductory Data Structures, Discrete Mathematics

EMPLOYMENT

Instructional Aide - *Introduction to Computers and Programming (ENGR 101)* *August 2020 - Present*

- Held weekly office hours and labs to aid first year engineering students with projects and basic programming principles in both C++ and MATLAB
- Tasked with assisting course staff in converting to remote instruction during the COVID-19 pandemic

Student Software Engineer and Researcher - *Multidisciplinary Design Program* *Summer 2020*

- Implemented computer vision algorithms for use on video research datasets at UMTRI (University of Michigan Transportation Research Institute) on team DEVIATE (Data Elements from Video using Impartial Algorithm Tools for Extraction)
- Constructed and tested a tree-like data structure in Python containing video objects, along with their children and attributes, in order to track and save user-bounded objects throughout video frames
- Helped to create a poster and abstract to showcase the team's software design at the MDP Design Exposition

Seasonal Worker - *Sensational Spas* - Stevensville, MI *Summer 2017*

- Monitored the pH, alkalinity, and cleanliness of customers' spas throughout high traffic summer months

EXPERIENCE

Whirlpool Innovation Challenge *September 2018 - February 2019*

- Collaborated with a team to engineer and market a new Stand Mixer accessory for KitchenAid
- Used SOLIDWORKS to create and print a functional prototype of the product after analyzing the results of multiple surveys
- Presented a business plan and prototype of the product to a team of Whirlpool executives, placing in top ten of 31 teams

Bridgman Foundation of Educational Excellence Fundraiser *Summer 2017*

- Designed and helped auction a decorative shovel to raise funds for the Bridgman STEM Lab

PROJECTS - *github.com/sethafancher*

Go Fish (C++) *July 2020*

- Designed and implemented a Go Fish card game simulator using basic object oriented programming principles that includes optional intelligent AI and human players

Personal Portfolio Website (HTML/CSS) - *sethafancher.github.io* *June 2020*

- Created and published a personal portfolio website that includes a resume, projects, and contact information

Piazza Post Classifier (C++) *April 2020*

- Constructed a classifier for posts on the Piazza forum using maps and basic machine learning techniques

Laptop Case with Extendable Tray *January - April 2020*

- Designed and engineered an alpha prototype of a laptop case with an extendable tray to offer college students more work room on small lecture hall desks
- Used MS Project and SOLIDWORKS to manage team resources and create an alpha prototype, respectively

Euchre (C++) *February 2020*

- Designed and implemented a classic Euchre card game simulator using object oriented programming techniques that includes optional human and simple AI players

SKILLS AND TECHNOLOGIES

Proficient: C++ | MATLAB | Git | SOLIDWORKS | Visual Studio | Spanish (four years of experience)
Some Experience: Python | HTML | CSS | Android Studio | MS Project