

# Seth A. Fancher

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## EDUCATION

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**University of Michigan, College of Engineering** – Ann Arbor, MI (GPA: 3.95) *May 2023 (Expected)*

- B.S.E in Computer Science and Engineering
- Relevant Coursework:
  - EECS 280 – Programming and Introductory Data Structures
  - EECS 203 – Discrete Mathematics

## EMPLOYMENT

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

- Held weekly office hours to aid students with projects and course material in both C++ and MATLAB
- Proctored and graded student exams in order to assist course directors

**Multidisciplinary Design Program** – *Software Development Fellow* *Summer 2020*

- Implemented computer vision algorithms for use on video research datasets at UMTRI (University of Michigan Transportation Research Institute) on team DEVIATE
- Constructed a tree-like structure to store and manipulate video objects and their children/attributes in Python

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

- Monitored pH and cleanliness of customers' spas to ensure their satisfaction

## EXPERIENCE

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**Whirlpool Innovation Challenge** *Fall 2018 - Spring 2019*

- Collaborated with a team to engineer and market a new Stand Mixer accessory for KitchenAid
- Presented a business plan and prototype of the product to a team of Whirlpool executives
  - Placed in top ten out of 31 teams

**Bridgman Foundation of Educational Excellence Fundraiser** *Summer 2017*

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

## PROJECTS - [github.com/sethafancher](https://github.com/sethafancher)

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**Go Fish (C++)** *June 2020*

- Constructed a Go Fish card game simulator including optional intelligent AI or human players to enhance comfortability with data structures and polymorphism

**Personal Portfolio Website (HTML/CSS)** *June 2020*

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

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

- Designed and implemented classifier for posts on the Piazza forum using basic machine learning techniques in order to increase comfortability with data structures

**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 including optional human or simple AI players to solidify skills in data structures, object oriented programming, and polymorphism

**Content Aware Image Resizer (C++)** *January 2020*

- Implemented a program using the seam carving algorithm and basic computer vision principles to intelligently resize images

## SKILLS AND TECHNOLOGIES

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**Proficient:** C++ | MATLAB | Git | SolidWorks | Visual Studio | Spanish (four years of experience)

**Some Experience:** Python | HTML | CSS | Android Studio | MS Project