

EDUCATION

University of Michigan, Ann Arbor, MI

Bachelor of Science, Computer Science

September 2019 – December 2023

Cumulative GPA: 3.5/4.0

Relevant Coursework: Data Structures and Algorithms, Discrete Structures, Algorithm Design and Analysis, Intro to Computer Organization (Fall 2022), Web Systems (Fall 2022), Programming and Introductory Data Structures

Awards and Honors: James B. Angell Scholar, UM-Dearborn Emerging Leader (2020 & 2021), Dean's List, Eagle Scout

SKILLS

Programming Languages: C++ • C# • Java • Python • HTML • CSS • JavaScript • SQL • XAML

Technologies: Linux • .NET • Node.js • React • Git • Visual Studio • WPF • Figma • Bubble

Other: Machine Learning • Object-Oriented Design • MVVM • Scrum • RESTful APIs • Unit Testing • Microsoft Office Suite

RELEVANT EXPERIENCE

Software Engineer Intern

Esri

May 2022 – Present

Redlands, California

- Interned in Esri's Professional Services division to manufacture software for both civilian and defense agencies that enables them to create and automate the production of topographic maps based on various standards.
- Developed practical add-ins for Esri's ArcGIS Pro software using their .NET SDK, coding in C# and XAML.

Undergraduate Research Assistant

UM-Dearborn Systems & Security Lab

March 2021 – May 2022

Dearborn, Michigan

- Conducted research focusing primarily on the intersection between Machine Learning and Cybersecurity.
- Modified and executed Python scripts in a Linux environment to convert over 30,000 binary code samples into a dataset of Hilbert and Entropy space-filling curve images.
- Tuned Convolutional Neural Network models to detect ransomware files with 99% accuracy.
- Created a Python web crawler to extract over 5,000 HTML samples from a list of the world's most visited websites.
- Co-authored and edited a research paper that is currently undergoing peer review.

PROJECTS

TSP/MST Solver

- Coded well-known graphing algorithms and heuristics such as Prim's, Arbitrary Insertion, and Branch and Bound to construct a Minimum Spanning Tree or solve the famous Traveling Salesman Problem for a given set of coordinates.

SQL Relational Database Emulator

- C++ program supporting relational database creation/manipulation/querying using several essential SQL commands.

Natural Language Processing Program

- Used Machine Learning and NLP techniques to automatically identify the subjects of posts on a class-wide forum.

Euchre Card Game

- Programmed a card game called Euchre that can be played using either human or AI players, or a mix of both.

Content-Aware Image Resizing Tool

- Implemented the Seam Carving Algorithm in C++ to create a tool that resizes images according to user-inputted width and height without removing any crucial details from the original image.

ADDITIONAL EXPERIENCE

Software Developer – UM Autonomy

- Developed software using industry practices in collaboration with fellow members of a student-led project team.

Product Manager – MProduct

- Directed a team of students in creating a high-fidelity prototype for an instructor and course evaluation statistics app.
- Performed user research on over 30 product target user base members and made improvements based on feedback.
- Utilized Figma and Bubble to develop the application from design to Minimum Viable Product, to user testing.

President & Founder – South Asian Student Association

- Recruited and oversaw a team of 10 board members to increase campus-wide awareness of South Asian culture.
- Organized multiple large-scale events to accumulate an active member base of over 140 students.