

Jackson Donaldson

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EDUCATION

University of Michigan

Ann Arbor, MI

B.S.E. in Computer Science, Mathematics Minor

December 2024

GPA: 4.0 / 4.0

- Completed courses: Data Structures and Algorithms, Intro Data Science
- Current courses: Cybersecurity, Computer Organization, Natural Language Processing

Projects:

- Created efficient heuristic approaches to Traveling Salesman Problem in C++
- Generated text using an n-gram Natural Language Processing model in Jupyter Notebook
- Implemented content-aware image resizing algorithm using seam carving in C++

WORK EXPERIENCE

Caesar Creek Software

Miamisburg, OH

Software Engineering Intern

May 2023 - August 2023

- Collaborated with a partner to reverse engineer and research vulnerabilities of the Google Nest Protect, a smart smoke alarm running FreeRTOS
- Set and achieved objectives on own initiative to develop Nest Protect greenfield project; created toolchains and resources for planned future expansion
- Developed skills in using and misusing C++ Windows API calls, Linux Kernel Modules, and embedded ARM Cortex systems

SKILLS

Languages (High Proficiency): Python, C++

Languages (Intermediate Proficiency): C, C#, Java

Software: Git, Ghidra, Burp Suite, SolidWorks, OpenOCD

Protocols: Bluetooth ATT, OpenWeave, USB MMC, SPI

ACTIVITIES

Leaderboard Speed Coding Solver, Advent of Code

December 2019 - Present

- Creating code with emphasis on speed, efficiency, and reusability
- Using Python, achieved 2nd place in a puzzle with over 14,000 solves

Member, WolvSec Cybersecurity Club

August 2022 - Present

- 1st place in WolvCTF 2023, University of Michigan division

Member, Michigan Hackers Advanced Web Team

January 2023 - May 2023

- Initialized Amazon AWS instances with elastic load balancing to mitigate DDOS attacks

Control Systems Lead, Hartland Robotics

February 2021 - May 2022

- 2022 FRC Worlds Semifinalists; led expansion and development of robot control