William Russell

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Education:

University of Michigan, *Ann Arbor, MI* May 2022

College of Engineering **3.792 GPA**
B.S.E. Computer Science Engineering
Relevant Coursework:
ENGR 101: Intro Comp & Prog, EECS 203: Discrete Mathematics,
EECS 280: Programming and Introductory Data Structures, EECS 281: Data Structures and Algorithms,
EECS 370: Intro to Computer Organization, EECS 388: Intro to Computer Security

Skills:

Languages: C/C++, Python, Javascript, HTML, CSS, Java, Golang
Tools: Unix, GDB, Vim, Matlab, Git, MS Office, Xcode, VS Code, Command Shell
Communication: TEFL Certification, Fluent in English, Spanish

Experience:

Research Assistant: *University of Michigan Department of Nuclear Engineering* May 2019 - September 2019

- Worked to improve the performance of a C++ program simulating nuclear fission via a Brosa model
- Gained experience with Git, multithreading, and object oriented programming
- Firsthand experience on a team based programming project

Orientation Leader: *University of Michigan Office of New Student Programs* May 2019 - August 2019

- Assisted incoming students with the transition to the University of Michigan
- Gave important presentations to large groups and helped students to register for classes
- Served as a resource for information about campus life and coursework at the University

Assistant Teacher: *Barcelona, Conversation Assistant Program* September 2017 - June 2018 Gap Year

- Taught English as a second language to small groups of primary school students
- Required to formulate lesson plans, manage a classroom and engage with students
- Fostered English development in students

Peer Mentor: *Michigan Community Scholars Program at the University of Michigan* September 2018 - Present

- Work as a peer mentor, assisting new students with the transition to the University
- Represent the program as a site leader at volunteering events
- Community focused on community service and social activism

Projects:

Travelling Salesperson Program: December 2019

- Command line C++ program that calculates the shortest tour given an input set of coordinates
- Utilized a nearest insertion heuristic to calculate an upper bound in order to optimize executable runtime
- Made use of branch and bound algorithms to test possible permutations

Message Board Post Classifier: April 2019

- Developed a command line C++ program to identify posts on an internet forum based on topic
- Implemented Natural Language Processing methods to train classifier using input parsed from a CSV file
- When run, predicted the tag for each post based on the post contents and utilizing a "Bag of Words" NLP method against the trained dataset.

Euchre simulator: March 2019

- Wrote a C++ euchre card game simulator run on the command line
- Developed an I/O interface for user play against AI opponents, organized logic for AI players
- Structured a class based control system for game rules and score handling