Joseph A. Carnide

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Expertise and Skills

C C++ Python Pytorch Verilog Assembly HTML CSS JavaScript MATLAB Git/GitHub
Swim Instructor Certification, Standard First Aid With CPR-C Certification

Experience

"HEARTSYNC" - WEARABLE VITAL SIGN DETECTION SYSTEM University of Toronto, Toronto, ON
Lead Programmer Jan. 20th, 2024 - Jan. 21st, 2024

- Participated in UTRAHacks 24-hour Hackathon to resolve an issue of our choosing in the Biomedical field by using resources available to use such as CAD, ESP32s, heartbeat sensors, as well as any online resources
- Programmed an interactive website using HTML, CSS, and JavaScript to continuously accept data from the ESP32 board and display it using graphs and pop-up modules

LARGE-SCALE INTERACTIVE MAPPING SOFTWARE University of Toronto, Toronto, ON
Programming Member Jan. 2024 - Apr. 2024

- Currently working in a small team to produce interactive mapping software for the city of Toronto using quicker programming techniques and efficient teamwork
- Using C++ and standard library templates to organize large amounts of data into an organized, graphic map with a route mapping system

LEGEND OF ZELDA RECREATION PROJECT University of Toronto, Toronto, ON
Lead Programmer Mar. 2024 - Apr. 2024

- During the Computer Organization course, I participated in a team to code the first dungeon titled "The Eagle" from Nintendo's original Legend Of Zelda video game using the C language in a NIOS II architecture on a DE1-SoC FPGA.
- I designed the framework for each room, specifically the background, the wall and object boundaries, enemy spawn positions, and item drops. I also created the character class and focused on the main character's movement, attack, health, and inventory.

MACHINE INTELLIGENCE BURN CLASSIFIER PROJECT University of Toronto, Toronto, ON
Lead Programmer June 2023 - Aug 2023

- During the Applied Fundamentals of Deep Learning course, working in a group to create a 2-layer Convolutional Neural Network using Pytorch and Python through Google Colab to train a model with roughly an 80% success rate
- Assembled a dataset of 6631 images split in a 20/20/60 ratio to create the validation set, testing set, and training set respectively for deep learning model optimization

CITY OF VAUGHAN RECREATION SERVICES North Thornhill Community Center, Thornhill, ON
Aquatic Instructor Spring 2022 - Present

- Participated in 11-week terms to instruct 5-6 classes per term, amounting to an average of 30 students of age groups varying from 3 to 14 years of age
- Uses leadership and communication abilities to teach aquatic skills and manage students as well as the ability to work efficiently under pressure to deal with unexpected situations in the pool

Education

UNIVERSITY OF TORONTO
Bachelor of Applied Science and Engineering (B.A.Sc) in Computer Engineering + PEY Co-op Sep. 2022 – Apr. 2027 (expected)

- Faculty Of Applied Science And Engineering Admission Scholarship Recipient
- Relevant Skills: Design Engineering Solutions to Given Problems, Collaboration, Time Management, Problem Solving, Creative Thinking
- Intended minor in Artificial Intelligence Engineering and intended certificate in Engineering Business
- Relevant Courses: Computer Fundamentals, Programming Fundamentals, Applied Fundamentals of Deep Learning, Computer Organization, Software Communication and Design, Digital Systems, Engineering Strategies & Practice

CARDINAL CARTER ACADEMY FOR THE ARTS
High School Diploma Fall 2018 - Spring 2022

- Honor Roll Recipient for four years
- Skills Learned: Information Coordination between Several Parties, Student Government, Public Presentation, Musical Training, Teamwork, Python