Alexis Murari

Computer Engineer with Artificial Intelligence Minor.

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Skills

- **Programming Languages:** C, C++, Python, Verilog/SystemVerilog, HTML/CSS, MATLAB
- Great understanding of **Algorithms and Data structures** and **Operating Systems**
- Strong knowledge in **Computer Architecture/Hardware** and **Computer Security**
- Proficiency using MS Office (Word/Excel/PowerPoint), Windows and Mac OS and Linux distro
- Experienced in FPGA and ARM processor programming (ALU and VGA adapter design)
- **Spoken Languages** English (fluent), French (native), Italian (Fluent)

Experience

Virtual Park Research
Mouscron, Belgium

Computer Engineer Intern
May 2021 - September 2021

- Performed research to evaluate the use of hardware components to perform precise tracking for VR use
- Tested the components in terms of their latency, performance, and accuracy
- Developed a solution for faster extraction of 3D points after pose estimation
- Actively participated with the research team to optimize and find better solutions to make the attractions more user-friendly.
- Resolved Hardware and Software issues of several devices/components used in the Park.

Projects

DICOM Classifier for Automated Labelling
Capstone/Thesis
September 2021 - April 2022

- Implemented a Machine Learning solution to clean the DICOM metadata of CT scan images
- Responsible for the implementation and optimization of the model
- Automated the data cleaning and dataset creation tasks
- Computed precise performance measurements for testing

Planning and Exploration Tool – Web App
Software Engineering
October 2021 - November 2021

- Deployed a web application that enables efficient course planning for all University of Toronto students
- The main features include browsing, saving, creating timetables/plans while keeping track of the student's requirements
- Implemented the main functionalities of the website using Python Flask
- Gained experience in process like Agile and Test-Driven Development methodologies

Mushroom genus detection and classification
Intro to AI
February 2021 - April 2021

- Machine Learning project which detects and classify mushrooms
- Data Cleaning &Augmentation, Transfer Learning, ANNs, CNNs and performance measurements

File Transfer and Text Conferencing (C)
Computer Networks
October 2020 - December 2020

- Computer Networks project where I developed the server and client program for file transfer and text conferencing.
- Developed a great understanding of computer networks concepts and TCP/IP and UDP protocols

Geographic Information System (C++)
Software Design
January 2020 - April 2020

- Collaborated in a team of 3 where we designed an interactive map and implemented shortest path algorithms.

3D stack game on ARM processor (C)
Computer Networks
March 2020 - April 2020

- 3D game design logic and display were designed and implemented using ARMv7 DE1-SoC development board.

Memory Game on a FPGA board (Verilog)
Digital Systems
November 2019 - December 2019

- Designed and Implemented display, randomizer, and finite state machine modules

Soundboard application on Android
Personal Project
May 2021 - August 2021

- Designed and created a Soundboard app using Android Studio

Education

University of Toronto
Toronto, ON

BACHELOR OF APPLIED SCIENCE - COMPUTER ENGINEERING
September 2018 - June 2022
Minor in Artificial Intelligence and Engineering Business Certificate