Raymond Lam

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EDUCATION

Ryerson University, Toronto, Canada

Bachelors in Computer Engineering — Sept 2016 - Apr 2020

- Graduated with Honors
- GPA: 3.56/4.33

Course Completed:

- Object-Oriented Engineering Analysis and Design
- Algorithms and Data Structures
- Computer Architecture
- Operating Systems
- Embedded Systems
- Computer Networks
- Network Security
- Computer Vision
- Software Engineering
- Data Engineering

TECHNICAL SKILLS

- Java, C, Python, TensorFlow, VHDL, MIPS Assembly Language, Matlab, Arduino, SQL
- HTML, CSS, SASS, JavaScript, React, React Native, Angular, Flask, Express, Django, AntDesign, Material UI, React-BootStrap
- Microsoft Office, Visual Studio Code, NetBeans, Eclipse, Linux

PROJECTS

Pokédex Website

- Display an image gallery of all available Pokémon
- Search for a Pokemon by name or id number
- Fetch JSON from PokeAPI and insert into SQLite database which then can be queried

Online Cafeteria Website

- Companies can register to use this online cafeteria service where the company employees can order lunch meals to be delivered to the company ahead of time
- Group Project: responsible for the implementation of backend and database
    - Designed routes for POST and GET requests that process data between the frontend and the database to handle information such as account details, menu items, and order details

Spotify Music Controller Website

- Created a website where a host can set up a room code to allow guests to join the room and have access control the music using Spotify API
- Guest can control the music of a host's Spotify account without direct access to that Spotify account by using a voting system

Accelerated Stock Market Forecasting

- Using the TensorFlow library; to forecast the daily closing value of a single security over the next 30 days
- Ticker value is input into a Recurrent Neural Network(RNN) using accelerated computing of a GPU: GeForce RTX 2060S to predict the closing price
- Displayed the resulting chart in an HTML page which shows the actual closing price and the predicted closing price
- Group Project: responsible for the RNN configurations

RFID Security Door

- Program a servo motor to open a miniature door to accepted RFID keys
- LEDs indicator to help show the status of the security system feedback of the key taps and adding new security keys
- Group Project: responsible for the wiring of the system and RFID component to register the keys tap and open for accepted keys

Arithmetic Logic Unit(ALU)

- Perform bitwise and basic mathematical operations on two 8-bit inputs and display the result on seven segment display
- The ALU is implemented using VHDL and Block Diagrams and is composed of the following components: CPU, latches, cache, and a cache controller

Media Center Application

- Implemented an Embedded Computer System on MCB1700 Board
- Media Center application is composed with the following features: photo gallery, speaker mode that plays music connected to the computer and Tic-Tac-Toe displayed on the onboard LCD and interactable using the joystick

Ping-Pong

- Implemented on the Xilinx Spartan-3E FPGA
- Players can play ping-pong using a monitor connected to the board where players can control the paddles by interacting with the switches