

Conrado Aguilar

Computer Engineering Student

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EDUCATION

Toronto Metropolitan University

Toronto, ON

- Bachelor of Engineering in Computer Engineering, Sept. 2023 – May 2027

Relevant courses: Data Structures, Algorithms, Object-Oriented Programming, Computer Networks, Microprocessor Systems, Computer Organization and Architecture, Operating Systems, Advanced Algorithms, Software Design and Architecture, Software Requirement Analysis and SPEC, Electronic Circuits and Components, Signals and Systems.

PROJECTS

CPU Design

VHDL | FPGA Simulation | Digital Logic

Designed and implemented an 8-bit CPU with an Arithmetic Logic Unit supporting arithmetic and logic operations.

Implemented a finite state machine (FSM) to manage instruction sequencing and coordinate processor operations.

Developed core processor components including ALU, registers, and control logic to support arithmetic and logical operations.

Experienced hands on work testing and debugging hardware designs using Quartus II simulations and FPGA development

Personal Portfolio Website

React | TypeScript | HTML | CSS

Built a responsive and interactive personal portfolio website using React and TypeScript to apply front end concepts showcasing projects, skills, and academic experience.

Gained hands-on experience by working with component based architecture, props and state management in a real front end project.

Built reusable interface components and applied consistent styling to improve layout structure, accessibility, in order to enhance user experience.

Implemented a multi page application with clear navigation and organized content.

SKILLS AND TECHNOLOGIES

Programming Languages: Java, C/C++, Python, JavaScript, TypeScript

Web & App Development: Google Colab, Netbeans, JavaFX, HTML/CSS

Hardware & Embedded Systems: FPGA Development, Digital Logic Design, RTL Design, Verilog/VHDL, Quartus II Simulation, Microcontroller Programming (Assembly, HCS12) Systems, Tools and Cloud: Linux Environments, Git/GitHub, AWS, Microsoft Azure

Certifications: Introduction to Artificial Intelligence (IBM)

- Gained foundational knowledge of AI Concepts along with evaluating the ethical dilemmas and impacts of AI in everyday life.
- Applied AI principles to real-world case studies across different industries such as healthcare, business and robotics in order to maximize time management for companies.

EXTRA CURRICULARS

Metropolitan Undergraduate Engineering Society

Planning Committee Member

- Tasked with providing ideas and collaborating with other members, along with coordinating events with other committees, while having budget restrictions.
- Coordinated resources for events, including scheduling budgeting and vendor management.