Nhat Hung Nguyen

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EDUCATION

Bachelor of Applied Science and Engineering (B.A.Sc) in Electrical Engineering

Toronto Metropolitan University(Formerly known as Ryerson University) Sep. 2021 - Present

- Relevant courses: Electronic Circuits I/II, Software Systems, Electric and Magnetic Fields, Microprocessor Systems, Signal and System, Energy Conservation, Power Electronics, Power System Analysis, Advanced Electric Drives, Low Power Digital Integrated Circuit

SKILLS

Programming/Simulation || AutoCAD, Python, Java, Excel, MATLAB, C, Multisim, Arduino, VS Code
Tools || Oscilloscope, Function Generator, Power Supply, Signal Generator, Frequency Counter, Digital Multimeter, Insulation Resistance Tester, DC Power Supplies, Wire Strippers and Cutters, ESP32, ESP8266, OP-AMPS, FGPA
Other || Microsoft Office [Teams, Word, Publisher, Powerpoint, Excel], Analytical, Organization, Communication, Teamwork, Multitasking, Enthusiastic, Problem-solving, Leadership, Time Management, Passion for Learning, Fluent in **English/Vietnamese**

WORK EXPERIENCE

Cashier | Coco Fresh Tea & Juice - Toronto, ON June 2024 - Present

- Demonstrated excellent time management by efficiently handling high volumes of customer transactions during peak hours, while maintaining accuracy and a positive attitude.
- Worked collaboratively in a fast-paced, team-oriented environment, adjusting to last-minute shift changes and extended work hours when necessary.

Math Tutor | Annie's Tutoring Centre - Mississauga, ON Jan 2017 – Jul. 2023

- Delegated assignments to 20 students and provided instruction on challenging concepts, employing effective analogies for enhanced comprehension (Grades 1 - 9).

RELEVANT PROJECT

Smart Bartender Ordering System | *Python, FastAPI, ESP8266, Arduino, REST APIs, HTML/CSS/JavaScript, Wi-Fi*

- Designed and implemented a full-stack automated beverage dispensing system integrating a FastAPI (Python) backend, ESP8266 microcontroller, and web-based user interface.
- Developed RESTful APIs and JSON-based Wi-Fi communication to manage drink orders, system state, and synchronized software-to-hardware execution.
- Programmed ESP8266 firmware (Arduino C/C++) to parse backend instructions and translate drink recipes into timed relay control signals for pump-based liquid dispensing.
- Built a closed-loop control workflow where the microcontroller executes physical mixing, reports completion to the backend, and safely processes queued orders sequentially.

Arduino Project | *C++, Microcontroller, Arduino, ESP32, DMM, Sensors*

- Developed beginner-level Arduino projects incorporating RGB LEDs, Switches, a Servo Motor, an Ultrasonic Sensor, LED lights, a 7-segment display, and an LCD Display to create responsive and interactive environments.

Advanced Electronic Circuits Design Initiative | *BJT, OP-AMPS, Diodes, MOSFETS, Function Generator, Simulation*

- Developed, simulated, analyzed, implemented, and tested a transistor amplifier with multiple stages operating on a single supply, ensuring it met a predefined set of specifications.
- Conceived, simulated, executed, and validated a Linear Voltage-Controlled Multi-function Waveform Generator (VCFG) circuit - primarily focused on delivering a practical demonstration of knowledge through waveform generation techniques.

Simple General-Purpose Processor | *Verilog, Quartus, VHDL, RTL Design*

- Designed a VHDL/Verilog-based processor with an ALU and control unit, executing arithmetic operations such as addition, subtraction, multiplication, and division.