Neil Louise A. Castillon

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Education

Memorial University St. John's, NL
Bachelor of Engineering in Computer Engineering *Sep. 2021 – May 2026*

- **Interest**: Robotics, Control Systems, Machine Learning, Data-protection/Cyber-security
- **Honors & Awards**: Wilfred & Rose Davis Scholarship, 2021

Experience

Software Developer | Co-op May 2024 – Present
Jeddah International School *Jeddah, Saudi Arabia*

- Collaborating to create a dashboard web application to conduct reports and analysis on student and teacher data.
- Developing comprehensive reports on website issues and design considerations, and implemented code solutions to address identified problems.
- Debugging and troubleshooting computer hardware and software, involving network server environments.

Software Engineer | Co-op Sep. 2023 – Jan. 2024
NL Eats *St. John's, NL*

- Collaborated and led a team to develop the NL Eats Hydroponic mobile app using **MongoDB**, and **Javascript**
- Designed and launched **2** dynamic websites, using **Figma** and **JavaScript**, to raise awareness about food insecurity by **20%**
- Conducted analysis on streamline connection between hydroponic systems and servers, improving latency by **30%**

Certifications

Computer Hardware - Cisco, 2024
React - The Complete Guide (incl. React Router & Redux) - Udemy, 2023
Onshape Fundamentals: CAD - Onshape, 2022

Technical Skills

Languages: VHDL, Assembly, Java, Python, C/C++, C#, MongoDB, JavaScript, Typescript
Developer Tools: Solidworks, AutoCAD, Simulink, PSpice, Matlab, ModelSim, VS Code, IntelliJ, AWS, Git, Microsoft Azure
Technologies: React.js, React Native, Express.js, NodeJS, Flask, Firebase, Tailwind CSS, JavaFX
SoftSkills: Communication, Critical Thinking, Time Management, Adaptability, Team Player, Attention to Detail

Projects

NL Eats Hydroponic | *Arduino UNO, React Native, Express.js, Microsoft Azure* Sep. 2023 – Dec. 2023

- Engineered a **full-stack mobile application** for managing hydroponic systems, with real-time data processing
- Implemented **React Native**, and **Express.js** serving as REST API for a **Microsoft Azure** backend, with support for over **20** different species of plants
- Incorporated **Microsoft Azure** to establish a streamline live connection from an Arduino UNO system to a **MongoDB** database in **C**

Morse Encoder & Decoder | *Arduino Uno, Python, C++* Sep. 2023 – Dec. 2023

- Built a system allowing real-time conversion between text and Morse code using **Arduino**, with **Python** for signal processing and **C++** for logic.

Digital System Clock (Timer, Alarm) | *VHDL, FPGA Board (DE1-SoC), ModelSim* Sep. 2023 – Dec. 2023

- Designed and built a digital clock with timer and alarm features on an **FPGA** using **VHDL**, tested and verified through **ModelSim** simulations for functionality and accuracy.

Digital System Calculator | *VHDL, FPGA Board (DE1-SoC), ModelSim* Sep. 2023 – Dec. 2023

- Designed and implemented a digital calculator on an **FPGA** using **VHDL**, with operations tested and verified through **ModelSim** simulation.