

# DUC HUY NGO

## 4th year Electrical Engineering Student

Seeking internships starting in January 2025

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## EXPERIENCE

### Instrumentation, Controls & Electrical Engineering

#### ExxonMobil

05/2024 - 08/2024 St. John's, NL

- Collaborated with vendors and led meetings with offshore technicians to develop detailed plans for control system architecture enhancement of the Hibernia facility
- Participated in Factory Acceptance Tests to review and verify concepts for control network upgrades on the Hibernia platform
- Managed and reviewed instrumentation alerts to troubleshoot potential issues in Hebron platform's operations

### Instrumentation, Controls & Electrical Engineering

#### ExxonMobil

09/2023 - 12/2023 St. John's, NL

- Conducted a comprehensive obsolescence study on Hebron's IC&E equipment to minimize operation risks and maintain integrity
- Collaborated with contractors to provide solutions to Variable Frequency Drive upgrades to optimize Hibernia's operation
- Supported facilities' management of change to ensure execution completion, document updates, and equipment maintenance revision

### Electrical Engineering Quality Assurance Inspector

#### The Cahill Group

01/2023 - 04/2023 Corner Brook, NL

- Managed the operation and schedule of electrical panels to minimize commissioning delays
- Inspected electrical equipment such as sensors and controllers in the Building Automation System to ensure project requirements and accurate readings in the control interface
- Continuously evaluated electrical systems' performance and managed on-site issues in BIM360

### Electrical Project Coordinator

#### The Cahill Group

05/2022 - 08/2022 Corner Brook, NL

- Monitored weekly progress with electrical device installation status and generated productivity reports in Power BI
- Managed on-site technical issues and updated electrical equipment status in Bluebeam

### Electrical Designer

#### Paradigm Engineering

09/2023 - Present St. John's, NL

- Research electrical components and PCB design in autonomous cars
- Design 48V board for the vehicle motion control
- Design an E-stop system, connected to control and power boards, to safely halt the car in an emergency

### Electrical Engineering Member

#### Eastern Edge Robotics

09/2021 - 04/2022 St. John's, NL

- Controlled the Remote Operated Vehicle underwater to complete tasks using a console and camera
- Soldered and crimped wires to connect electrical components and design schematics with KiCad

## EDUCATION

### Co-operative Bachelor Program in Electrical Engineering

#### Memorial University of Newfoundland

09/2021 - 04/2026 St. John's, NL

- Class of 2026. GPA: 4.0
- Recipient of seven scholarships
- Academic tutor at EO Success Center

## SKILL HIGHLIGHTS

LTSpice KiCad PCB Design

Python Arduino C++ Matlab

### Sensor & Motor Control

## PROJECTS

### Autonomous Car Control Board

- Incorporated all design and component selections into a single compact board that controls the car's power system
- Main outputs include: Hot swap controller motors, sensors, computer, and microcontrollers

### Self-driving Car Virtual Controller

- Developed a 2D controller for a simulated autonomous vehicle with Python
- Used trajectory feedback to update the car and track information to controller
- Tuned parameters to achieve 100% accuracy in Carla simulator's race track

### Voice-based Lighting System

- ESP32 is programmed to output signals and to control the relays. The lights turn on/off when the relays close/open the lighting circuits individually or at once
- Real-time monitors and dashboards for the lighting system are available on both computers and mobile phones

## RELEVANT CERTIFICATES

### Introduction to Self-Driving Cars

### Introduction to Power Electronics

### Sensor Circuit Design