




# Liam Earle

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## Experience

### Bluedrop ISM

Jan 2022 – Aug 2022, May 2023 – Aug 2023, Jan 2024 – April 2024

#### Full-Stack Developer

- Architected and Developed a metrics and telemetry system cutting down bug diagnosis time by 25%.
- Performed major project refactor to ensure platform security and stability, reduced vulnerabilities from 200 to 0.
- Developed a new feature to allow for organization admins to customize links to align with an organizations own privacy policy and terms of service.
- Demonstrated expertise in deployment of new services, ensuring seamless integration, and leveraging containerization technologies like Docker and Kubernetes.

### Memorial Baja

Dec 2022 – present

#### Software Team Lead (Extra Curricular)

- Developed a digital gauge cluster for the team's vehicle to clearly display accurate vehicle diagnostics to the drive.
- Mentoring junior students in software development and embedded systems in the C programming language.

### Paradigm Engineering

Sept 2023 – present

#### Software Team Member (Extra Curricular)

- Mentoring junior students in software development, Linux, ROS2, and environment setup.
- Developing the core ROS2 software suite for the team's autonomous vehicle to navigate through the Autonomous Karting Series competition.

### MUNStar-1

Aug 2023 – present

#### Software Team Member (MCS) (Extra Curricular)

- Developing the FreeRTOS-based operating system for the team's satellite to manage the satellite's subsystems.
- Architecting CI/CD pipelines for the satellite's software to ensure the software is tested and deployed efficiently.

### Retrievium (Memorial University)

Sept 2022 – Sept 2023

#### Full-Stack Developer (Part-Time)

- Created a GitHub-style database for organic compounds, speeding up chemical research
- Demonstrated expertise in developing REST APIs with FastAPI and creating user interfaces with ReactJS

## Education

### Memorial University of Newfoundland

St. John's, NL, Canada

Bachelor of Engineering - Computer Engineering

2027

Minor: Mathematics (Calculus and Discrete Math)

Treasurer of IEEE Student Branch

## Skills

**Languages:** JavaScript, TypeScript, C/C++, Python, Java, C#, Dart, SQL, HTML, CSS, Bash

**Frontend:** ReactJS, AngularJS, Flutter, Astro, NextJS, RemixJS, Webpack, TailwindCSS, ChakraUI, Bootstrap

**Backend:** NodeJS, ExpressJS, FeathersJS, FastAPI, Postgraphile, Apollo GraphQL, SocketIO

**Database:** PostgreSQL, SQLite, MySQL, Firebase, MongoDB

**Embedded:** Arduino, Raspberry Pi, ESP32, FreeRTOS, ROS2

**Tools:** Git, GitHub Actions, Docker, Kubernetes, Tilt, OpenTelemetry, Grafana

## Projects

### Copper Social

Jan 2024 – Mar 2024

- Developed and maintained a monorepo for Copper, a communication platform amalgamating features from Discord and Instagram.
- Implemented front-end functionalities using RemixJS, React, and ChakraUI, enhancing user experience and interaction.
- Engineered robust back-end solutions utilizing Express.js, Prisma, and SQLite, ensuring efficient RESTful API development and data management.
- Integrated real-time messaging features leveraging SocketIO, enhancing user engagement and interactivity within the platform.