

SYED YEAD ZAMAN

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Technical Skills

Languages: C, C++, Python, Java, C#, PHP, Assembly

Embedded Systems: STM32, ESP32, FreeRTOS, UART, SPI, I2C, GPIO

Digital Design: VHDL, SystemVerilog, Xilinx, Quartus, Logisim

Infrastructure & Tools: Linux, Docker, Kubernetes, GitHub Actions, Jenkins, Postman, STM32CubeIDE, KiCad

Education

University of Ottawa

Sep 2021 – Apr 2026

Bachelor of Applied Science in Computer Engineering (Co-op)

Ottawa, Ontario

- **Relevant Coursework:** Embedded Systems, Computer Architecture, Digital Logic Design, OS, Networking

Experience

DistillerSR

May 2025 – Aug 2025

Software Developer (Co-op)

Ottawa, Ontario

- Added and documented new API endpoints & unit tests in a **PHP** backend used by large enterprise clients.
- Developed and maintained comprehensive **Postman** integration test suites to validate new routes.

Ford Motor Company

Sep 2024 – Dec 2024

Software Developer (Co-op)

Ottawa, Ontario

- Implemented 100+ unit tests using **pytest** and **Slash**, increasing test coverage by 20% in testing library.
- Refactored report generation script to add compatibility with Google Cloud Platform (**GCP**) and integration with a **Jenkins pipeline**, automating hourly reports seen in 100+ employee bi-weekly meetings.

Pinax

Jan 2024 – Apr 2024

Site Reliability Engineer (Co-op)

Remote

- Designed and deployed a **Kubernetes deployment** to integrate **blockchain** data into a **ClickHouse** database.
- Generated a custom Substreams module in **Rust** to extract and process blockchain data efficiently.

Agriculture and Agri-Food Canada

May 2023 – Aug 2023


High Performance Computing and Science Support Team (Co-op)

Ottawa, Ontario

- Created YAML configurations for **Kubernetes deployments**, streamlining Pod deployments used by **OKD**.
- Engineered scalable **TypeScript** scripts to generate formatted data for **Power BI** from **supercomputer** data.

Projects

Office Tracker Embedded System with ESP32 and Custom PCB | *ESP32, IoT, PCB* Nov 2025 – Mar 2026

- Designed and deployed an embedded attendance tracking system using an **ESP32 microcontroller**, **RFID reader**, and a custom **KiCad PCB**.
- Implemented firmware handling scans, GPIO events, and HTTP communication with a **Go backend API** .
- System deployed in the IEEE office to track attendance for **30+ active users**.

Autonomous Pothole Detection Rover | *Robotics, Ros2, Computer Vision, AI*

Jan 2025 – Dec 2025

- Collaborated on an autonomous rover platform using a Raspberry Pi and **ROS2** to coordinate sensors, computer vision, and motion control.
- Integrated a **YOLOv5** computer vision model for real-time pothole detection from onboard camera data.
- Developed the rover interface using **SvelteKit** and supporting infrastructure including CI/CD pipelines.

8-bit Processor with Assembler and Compiler | *Python, Assembly, Compiler Design*

Oct 2024 – Jan 2025

- Designed an **8-bit RISC CPU** architecture, including ALU, instruction decoder, and control unit.
- Developed an **assembler** and minimal **C compiler** targeting the custom instruction set architecture.

Leadership

VP Academic, IEEE uOttawa Branch

2025 – 2026

- Organized and ran academic workshops and review sessions for **300+ students** across 30 sessions over the year.
- Hosted **workshops** on subjects such as STM32 & FreeRTOS, IoT, Linux, PCB Design, CI/CD, and Docker.
- Managed a **team** of commissioners to **coordinate** events, get student feedback, and improve academic resources.
- Acted as a liaison between students and faculty, communicating concerns and **advocating** for students.