

Maxim Faber

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EDUCATION

Queen's University

BASc. in Mechanical Engineering

Ontario, Canada

Sep 2024 – Jun 2028

FSAE, Powertrain: Designed fittings and mounts for coolant system.

SKILLS

Languages: Rust, C/C++, Python, Go, SQL, MATLAB, Html, CSS

Technologies: Docker, Iced, ROS, Linux/WSL, SDL, Vulkan, React, Typescript, Tailscale, Jepsen, SWD

CAD: Solidworks, Fusion, Bluebeam REVU

EXPERIENCE

Queen's Small Scale Robotics Lab

Undergraduate Research Assistant

Ontario, Canada

May 2026 – Present, Part-Time

- Developing an "advancer" system for a magnetic soft continuum robot (MSCR) for lung navigation and mechanical sensing, aimed at early lung cancer detection in collaboration with Kingston General Hospital.
- Leading design and fabrication of custom catheters and integration mounts to interface the robot with the catheter, allowing for live force feedback and precise actuation.
- Met project milestones, delivered regular team presentations.

Senezco Fire Engineering

Engineering Consultant Intern

Ontario, Canada

May 2025 – Aug 2025, Full-time

- Assessed design packages on code compliance and provided reports to professional engineers.
- Assisted with drawing markups for design revisions, gaining exposure to real-world project delivery workflows.
- Actively participated in client-facing meetings, providing clear technical updates and aligning deliverables with client expectations to ensure satisfaction and project alignment.

WeBuild/Connect6ix — Ontario Line Subway RSSOM

Engineering Intern

Ontario, Canada

Apr 2024 – July 2024, Full-time

- Oversaw data collection and data entry in Aconex CDE, optimized data management for more accurate project tracking, contributing to improved reporting and productivity.
- Organized project documentation to enhance reporting accuracy, supporting effective data-driven decisions.
- Engaged in client-facing meetings, providing technical insights to align project goals and expectations.

PROJECTS

Wether — Weather CLI (Rust) [Still In Development] | [Codeberg](#)

- Built a weather CLI for retrieving forecast data from the Open-Meteo API with SQL-based local caching.
- Designed and implemented a custom query builder, CLI parser, and the `meatball-rs` SDK for Open-Meteo weather and geolocation services.
- Implemented compliant HTTP header and chunked-transfer parsing, plus a custom CamelCase-to-query-case converter for API parameter generation.

Lox Interpreter (Rust) | [Blog](#)

- Implemented a tree-walk interpreter for the Lox language in Rust, following *Crafting Interpreters*.
- Built core frontend pipeline including a lexer, recursive descent & pratt parser, and semantic resolver for variable binding and scope resolution.
- Designed for future extension toward a linear IR-based execution backend to enable performance optimizations and potential bytecode compilation.