

# Thomas Haene

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## SKILLS

**Electrical Engineering Skills:** MATLAB, SCPI Instrument Command Language, LTSpice, PCB Design, Soldering

**Software Engineering Skills:** Machine Learning, JavaScript & TypeScript, React

## EXPERIENCE

**Plant Photonics Research Group, McGill University** - *Part-time undergraduate research assistant*

MAY 2024 - PRESENT | MONTREAL, QC

- Contributed to a project on digital communication via free-space optical transmission, optimizing high **SNR** and low **BER** for rotary interface communication in an MRI system.
- Automated** experimental measurements using MATLAB and VISA protocol for remote instrument control, enabling reliable signal capture at varying distances and data rates.
- Currently working on a Fiber Optics project involving a polarization controller and developing a model of an Optical Communications Link using a **Neural Network** for a capstone project.

**Populus Solidarity Cooperative, Montreal, QC** - *Front-end Web Developer Intern*

MAY 2024 - AUGUST 2024 | MONTREAL, QC

- Populus Solidarity Cooperative supports nonprofits and cooperatives. I collaborated with a team of developers to build a SaaS digital dashboard, enabling clients to manage compliance tasks and fundraising resources. My role involved designing and implementing key frontend components for the platform.
- Used **React**, Remix.run, Adobe Aria library, TailwindCSS and Payload CMS in the tech stack.

## EDUCATION

**McGill University, Montreal, QC** - *Major in Electrical Engineering*

September 2021 - December 2025

## Extracurriculars

**The Factory McGill**, - *President*

MAY 2024 - MAY 2025 | MONTREAL, QC

- The Factory is a student-run hardware lab at McGill, I **lead** a team of 25 managers and oversee the operations and membership usage of the lab. The Factory is a space for engineering students to work on personal projects, and learn new skills.

## Projects

**StudySync - Publicly Available Google Chrome Extension**

- Chrome extension** to facilitate tracking study sessions, featuring simple start, stop, and start-new functionalities for tracking time. Tool captures study times, stores them in a **database**, and visually presents daily study **durations** and **trends** through an integrated calendar and graphs for enhanced study consistency monitoring. [View study sync](#)