

# Soham Limbachia

[github.com/SohamLimbachia](https://github.com/SohamLimbachia) | [sohamlimbachia.com](http://sohamlimbachia.com) | [limbachi@ualberta.ca](mailto:limbachi@ualberta.ca) | [linkedin.com/in/soham-limbachia](https://linkedin.com/in/soham-limbachia)

## EDUCATION

### B.Sc. in Engineering @ University of Alberta

*Computer Engineering Co-op – Software Option*

Expected Graduation: June 2027

## EXPERIENCE

### BossPac Engineering & Technology

*Software Developer Intern*

May 2025 – Current

*Full-Time - Calgary, AB*

- Developed a real-time web application for Class 1 freight railroads with a configurable condition-based monitoring dashboard and geospatial map covering just over 7,650 miles of track.
- Implemented a full-stack system using PostgreSQL, Express.js, React.js, Node.js, and the AWS Cloudscape Design System, deployed on AWS for BossPac Rail Integrity Management [BRIM].
- Built a real-time multivariate anomaly detection pipeline for broken-rail detection, integrating a distributed sensor network, a multi-process Python 3 logger, and verification using XGBoost (XGB) + BiLSTM models to reduce false alarms by 52%.
- Performed system evaluations, performance monitoring, and field installations, providing operational support and preventative maintenance in production environments.

### Outlier AI

*Multi-subject Expertise Trainer*

Sep. 2024 – Current

*Casual - Remote*

- Prompted multi-modal AI models with domain-specific tasks to evaluate capabilities across Math, Physics, Computer Science, Data Science, and general instructional/behavioral in over 300 tasks.
- Analyzed and corrected model responses, reviewed peers' work, assigned grades, and provided structured feedback to improve model reliability and adherence to guidelines.

### University of Alberta

*Teaching Assistant, CMPUT 274 - Introduction to Tangible Computing I*

Sep. 2024 – Dec. 2024

*Part Time - Edmonton, AB*

- Assisted over 250 students in instruction by developing and marking assignments, facilitating lab sessions, and hosting office hours to support student learning.
- Supported an intensive, studio-style Python and Linux course focused on procedural programming and core algorithms/data structures (lists, queues, trees, sorting, searching) through problem-based learning.

### Suncor Energy Inc.

*Process Automation and Controls System Student*

May 2023 – Apr. 2024

*Full Time - Fort McMurray, AB*

- Supported a cooling tower control and emergency system segregation project, contributing to safer and more reliable plant operations.
- Developed an input signal conditioning algorithm for a hydrogen flare controller and created a site-wide, web-based diagnostic application for PLC units to streamline troubleshooting.
- On-boarded the controls/automation department to GitHub and assisted control room operations with training and troubleshooting of automation and control systems.

## VOLUNTEERING & PROJECTS

### University of Alberta - Computer Engineering Club Hackathon

Aug. 2024 – May 2025

*Director of Sponsorship - UAlberta HackED & HackED Beta*

*Edmonton, AB*

### University of Alberta - EcoCar

Sept. 2023 – May 2024

*Electrical & Computer Engineering Member - Hydrogen FCEV*

*Edmonton, AB*

### Spelling Bee of Canada - Online Learning Platform

Oct. 2021 – Sept. 2022

*Assistant IT Director - Software Testing*

*Remote*

## SKILLS

Programming Languages/Frameworks: Python, TypeScript/JavaScript, React, Express, SQL, HTML, CSS, Cypress

Technologies: Dev. Tools [Visual Studio Code, Jupyter Notebook, Virtual Machines, Android Studio, Google Lighthouse], Project Management [Figma, Microsoft Office Suite, Git, Azure, GitHub], System Admin / DevOps [PostgreSQL, Postman, Azure DevOps, Google Cloud Console, Docker, Kubernetes, Firebase, Redis, AWS], Data Science [Scikit-learn, Numpy, Pandas, Tensorflow, PyTorch, MLFlow, AWS Sagemaker, plotly, XGBoost, ETL Pipelining, Excel]