

Soham Limbachia

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EDUCATION

B.Sc. in Engineering @ University of Alberta

Expected Graduation: June 2027

Computer Engineering Co-op – Software Option

EXPERIENCE

BossPac Engineering & Technology

May 2025 – Current

Software Developer Intern

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

Sep. 2024 – Current

Multi-subject Expertise Trainer

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

Sep. 2024 – Dec. 2024

Teaching Assistant, CMPUT 274 - Introduction to Tangible Computing I

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.

May 2023 – Apr. 2024

Process Automation and Controls System Student

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]