

# Raquib Lavani

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## EDUCATION

### University of Alberta

*Bachelor of Science in Software Engineering Co-op*

Edmonton, AB

Sep. 2019 – May 2024

## TECHNICAL SKILLS

**Languages:** TypeScript, JavaScript, Rust, Python, C++, Java, Bash

**Frameworks:** Next.js, React, Node, Flask, Jest, JUnit, Robotium, Selenium

**Developer Tools:** AWS Fargate, AWS ECS, Docker, Git, Prisma, Figma, Android Studio

## EXPERIENCE

### Software Developer Co-op

May 2023 – Present

*InsideDesk Inc*

*Toronto, ON*

- **Leading a project** to overhaul 24+ micro-services by migrating to TypeScript, enforcing typing and conventions
- Developing a containerized Node application to scrape information using fuzzy matching and headless Chromium
- Built performant parallelized object iterators for an in-house library **increasing performance speed by 27%**
- Defined 4+ YAML scripts to enable smooth CI/CD deployment of applications as AWS Fargate Tasks

### Undergraduate Teaching Assistant

Sep. 2021 – May 2023

*University of Alberta*

*Edmonton, AB*

- **Leading seminars** for 100+ students to teach logic, induction, probability, number theory and graph theory
- Conducting office hours to support 350+ students in formal systems and logic topics
- Grading and providing feedback for formal systems assignments and examinations

### Developer Intern

May 2022 – Aug. 2022

*Scotiabank*

*Toronto, ON*

- Developed and automated a multi-tiered compliance tool using VBA saving **35+ hours** of weekly manual work
- Devised a Python program to concatenate and format multiple csv files improving upload speed by 90%
- Led the development of the automated OSFI dashboard by using ActiveX and ADO connections in VBA
- Created a tool for Excel to SQL migration employed by entire department improving lookup speed **by over 400%**

### Data Science Intern

Jan. 2022 – Apr. 2022

*Scotiabank*

*Toronto, ON*

- Designed an isolation forest fraud detection algorithm using scikit in python improving fraud flagging by 12%
- Analyzed **3 million+ data points** using NumPy to compare fraud volume and rate in two different login streams
- Led the automation of a data pipeline using Demisto to push a scalable fraud detection tool to production
- Utilized multi-threading in Python to pull login data from QRadar **improving data pull speed by 300%**

## PROJECTS

### NLP Undergraduate Research | *Python, Flask, Bash, PyTorch, kenlm*

- Benchmarked performance of two machine learning models which identify instances of negative language transfer
- Implemented a recurrent neural network (RNN) using PyTorch and an n-gram language model to train models
- Automated generation of **50+ language models** used for k-fold cross validation in kenlm using bash
- Boosted language model loading speed by 40% by converting ARPA files to Binary files

### FoodBook | *Android Studio, Java, Firebase, JUnit, Robotium, YAML*

- Developed a functional android application for meal-planning and grocery shopping
- Implemented the Parcelable interface for inter-activity data transfer **increasing transfer speed by 150%**
- Devised a muti-threaded comparison algorithm to detect missing ingredients boosting detection speed by 40%
- Wrote unit tests using JUnit increasing **test coverage to 90%** and automated testing using Github workflows

### Inclusify | *React, Node.js, SQLite, Javascript, Azure Computer Vision API, Hootsuite API*

- Designed a full-stack web application using React to make social media posts inclusive
- Wrote asynchronous functions to **coordinate 4 API calls** and post on Twitter using the Hootsuite API
- Integrated Azure Computer Vision to caption images and LanguageTool API to check language errors
- Demonstrated app functionality to 1000+ Hack the North participants and **won best use of Hootsuite API**