Raquib Lavani

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EDUCATION

University of Alberta — Edmonton, AB
Bachelor of Science in Software Engineering Co-op — *Sep. 2019 – May 2024*

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Rust, Bash, SQL (SQLite), JavaScript, HTML/CSS, VBA
Frameworks: React, Node.js, Flask, JUnit, Robotium, Selenium
Developer Tools: Git, Firebase, Google Cloud, Compute Canada, VS Code, Figma, Android Studio
Libraries: Pandas, NumPy, Matplotlib, PyTorch, Kenlm, Scikit-Learn, Beautiful Soup

EXPERIENCE

Junior Software Developer Co-op — May 2023 – Present
InsideDesk Inc — *Toronto, ON*
- **Leading a project** to upgrade 24+ backend micro-services by revamping dockerfiles and node versions
- Developing a collector micro-service in Typescript to gather patient information from an insurance portal
- Defined a YAML script format to enable smooth packaging of collectors as AWS Fargate Tasks

Undergraduate Teaching Assistant — Sep. 2019 – Present
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

Software 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, 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, XML, 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 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, Express.js, 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***

Leadership

SheHacks+ 6 Judge: Represented Scotiabank as a judge to shortlist projects which improve financial accessibility
Computer Engineering Club Mentor: Mentoring a cohort of 2-4 software engineering students per semester