

Harsh Amin

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EDUCATION

University of British Columbia

BSc Co-op Computer Science · Math

GPA: 89%

April 2027

Vancouver, BC

Relevant Courses: Data Structures and Algorithms, Software Engineering, Discrete Mathematics, Computer/Operating Systems, Machine Learning, Web Development

Awards: Trek Academic Excellence Scholarship - awarded to top 5% of faculty

Extracurricular: UBC Launch Pad Design Team, Intramural Basketball, Weight Lifting Club, Entrepreneurship Club

TECHNICAL SKILLS AND AWARDS

Languages: Java, Python, C/C++, Racket, R, HTML/CSS, JavaScript, TypeScript, SQL

Frameworks and Libraries: React, Flask, FastAPI, Node.js, Express.js, PyGame, Java Swing, Tidyverse, JUnit

Developer Tools: AWS, REST APIs, PostgreSQL, Postman, Git, VS Code, PyCharm, IntelliJ, JupyterLab

EXPERIENCE

Software Developer

Sep 2024 – Present

UBC Launchpad - Project: Forum (LLM based student question board for UBC classes)

Vancouver, BC

- Designed the **Retrieval Augmented Generation** model and implemented the **Chunking engine, Embedding model (Vectorization), and Retrieval system** for PDF documents
- Developed and tested **FastAPI** endpoints for course and document tagging, while implementing restricted access through auth for user validation
- Used **Python** to create automation scripts using the **Selenium WebDriver** to automate user login through the UBC portal and scrape course data
- Incorporated a **PostgreSQL** database through the use of **Supabase** and developed migration scripts in python and designed organizational structure for project SQL queries

Computer Science TA

Jan 2023 – Jun 2023

Henry Wise Wood High School

Calgary, AB

- Responsible for the marking and submissions of all student assignments, created test cases using **JUnit**
- Created assignments and presentation lessons on **Object Oriented Programming** and **Linked Lists** principles which I used to convey the principles in a more comprehensible manner

TECHNICAL PROJECTS

Harsh Reviews | PostgreSQL, Express.js, React, Node.js, REST API, git

Jun 2024 – Aug 2024

- Developed a full-stack restaurant reviews web application, implementing a responsive **React** front end
- Used **PostgreSQL** to store restaurant data and developed a **REST API** performing various CRUD operations through the use of **SQL queries** which are prevented against injections using parameterized queries
- Made multiple API calls through the use of **Axios** and used environment variables to ensure secure use of database credentials and API keys

AWS Emotion Playlist Generator | AWS S3, API Gateway, Lambda, Rekognition, React May 2024 – Aug 2024

- Developed an application which analyzes user emotion and develops Spotify playlists based on their emotion
- Took advantage of **AWS S3** to store the user image and used Lambda functions to make an API call to **AWS Rekognition** to detect user emotion
- The app implements a **WebSocket API** using **AWS API Gateway** to allow for 2-way communication with the **React** frontend, Lambda function makes a call to the Spotify API and sends the relevant info to the frontend
- Monitored API and Lambda status through **AWS CloudWatch** and progression during development

Heart Disease Detection Model | R, TidyVerse, Jupyter, Git, KNN, MySQL

Oct 2023 – Nov 2023

- Used a reputable **MySQL** data set and implemented **Tidy data principles** to develop a predictive model using the **KNN** algorithm with 5 fold cross-validation
- Took advantage of the **Data Prepping and Data Visualization** properties in R programming to clean the data and diagnose patients with heart disease with a **73% accuracy** within a group collaborative environment