

# GAURAB ACHARYA

Vancouver, BC, Canada

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## EDUCATION

### University of British Columbia

Bachelor of Applied Science in Biomedical Engineering — Specialized in Systems and Signals

Sep. 2019 – April. 2025

Vancouver, British Columbia

## TECHNICAL SKILLS

**Languages:** Python, Java, SQL, JavaScript, HTML, CSS, R, C, MATLAB, Swift

**Technologies:** Apache Airflow, Docker, Jenkins, Oracle, PostgreSQL, Clickhouse, Grafana

**Frameworks:** JUnit, React, Flask, Spring Boot, R Shiny, TensorFlow

## EXPERIENCE

### QuoteMedia

May 2024 – August 2024, May 2022 – April 2023

Software Engineer Intern

Vancouver, BC

- Improved database query throughput by 10x by tuning data schema and migrating legacy database from **Oracle** to **PostgreSQL**
- Contributed to the development and testing of a new data pipeline using **SQL**, **Python**, and **Apache Airflow** to migrate data from **Oracle** database to **Clickhouse** to 20x query efficiency on large aggregations for reports
- Created new API endpoints, from end to end, using **Java**, **SQL**, and **Spring Boot** to provide new financial data for clients
- Modernized financial API endpoints to improve data loading and response efficiency for a smooth financial chart experience
- Created an http load test pipeline using **Vegeta**, **Python**, and **Apache Airflow** to run and store results in **InfluxDB**, resulting in long term load test tracking in a dashboard setting
- Created dashboards in **Kibana** and **Grafana** to visualize key business metrics such as client API usage, speed, and load test results

### ProCogia

May 2023 – September 2023

R Developer Intern

Vancouver, BC

- Designed and created a R package, to analyze **R** scripts in less than 5 seconds, providing debug solutions, data operation tracking, and code assistance using the **OpenAI ChatGPT API**
- Constructed the package, using prompt engineering by setting AI system roles, and providing examples question and answer pairs, to generate results with 90% consistency

## PROJECTS

### UBC Capstone Medical Augmented Reality Device | *Unity, C#, ARKit*

- Developed an IOS app using **Unity** to render virtual customized objects for a Medical Device Startup, Vantech Medical, using **Apple ARKit's** image tracking and projection
- Integrated the client's image recognition machine learning model, with the Unity application, so that it can recognize specific objects and render a mapped virtual object, with less than 1 second latency


### Posture Position Corrector | *UBC Biomedical Engineering Student Design Team* | *React Native, JavaScript*

- Designed an app, connected to an accelerometer and gyroscope, to track posture data and support posture correction physiotherapy
- Developed posture position algorithms to send a notification when detecting 5° changes in posture.
- Built an app in **React Native** to connect with the hardware to allow users to visualize the data provide notifications

### Sneaker Image Recognition App | *Hack the North Winner* | *Python, TensorFlow Lite, Swift*

- Trained an image classification machine learning model using **Python** and **TensorFlow Lite**, to recognize Jordan sneaker models
- Built an iOS application, using **Swift**, allowing users to upload photos to recognize the model of Jordan sneakers
- Contained the machine learning model on device using the **HOT-G API**, to ensure data security and speed

### NBA Statistics Data Analysis | *Python, Dropbase API, R, R Shiny*

- Created visualizations and analyzed NBA statistics to find the top five players of each stat category using **Python**
- Stored CSV files in **Dropbase** to convert CSV files into JSON objects that can be called by the Dropbase API
- Created a web application  using **R** and **R Shiny** to include a responsive navigation bar and drop-down menu to let users filter on statistical categories, and seasons in a table view

## LEADERSHIP / EXTRACURRICULAR

### Basketball / Coaching

Spring 2016 – Present

*RBL Basketball* , *Drive Basketball* , *Strathcona Community Centre*

- 4x British Columbia Provincial Basketball Championship All-Star
- Coached over 1500 players in basketball camps and teams, working with three different clubs in Vancouver