

# Abhi Verma

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## EDUCATION

### University of British Columbia

Bachelor of Applied Science - Computer Engineering

Vancouver, BC

May 2026

- AWS Certified Solutions Architect - Associate Certification
- Trek Excellence Scholarship – Awarded for being in top **5%** of Engineering faculty

## EXPERIENCE

### UBC x AWS Cloud Innovation Centre

Software Developer Co-op

Vancouver, BC

May 2024 – Present

- Developed a web application to answer user queries about quantum matter research to foster collaboration and improve access to information for researchers using **AWS CDK** in **TypeScript** for infrastructure as code
- Enabled multi-tenant **Retrieval-Augmented Generation** by utilizing **PGVector** for efficient storage and querying of embedding vectors, achieving **25%** faster **LLM (Llama 3 70B)** response times using **LangChain**
- Developed a **RESTful API** for data management with **AWS API Gateway**, **Lambda** functions, and secure authentication via **AWS Cognito**, facilitating efficient material uploads to **RAG** pipelines
- Collaborated with a diverse group of stakeholders, presenting technical solutions and documenting each phase to ensure smooth deployment, including cost analyses to identify and implement strategies to minimize expenses

### UBC Launch Pad

Software Developer

Vancouver, BC

January 2023 – April 2024

- Utilized **AWS S3** and **Svelte** to implement a web application used for efficient document management, enhancing accessibility, organization, and security of Launch Pad's resources
- Incorporated an intermediary **PlanetScale SQL** database to store document metadata allowing for the ability to query, search, and filter sensitive information, improving data retrieval speeds by **40%**
- Gained proficiency in **Flutter** to construct mobile health application designed to aid individuals with epilepsy, providing a deep understanding of the **software development lifecycle** and working with customer specifications

## PROJECTS

### Faculty CV | AWS, Docker, React, PostgreSQL, LaTeX

[GitHub](#) 🔗

- Engineered an **AWS** and **React**-powered platform for the UBC Faculty of Medicine to streamline CV creation, enhancing operational efficiency across **19** departments, **3** schools, and **25** research centers
- Integrated external data sources and datasets by developing robust **ETL** pipelines that fetch, clean, and store raw data from CSV files uploaded to **S3** buckets and **APIs** into an **RDS PostgreSQL** database
- Automated CV generation using **Lambda** functions hosted in a **Docker** container to convert **LaTeX** to PDF

### Spotify VibeCrafter | Flask, Spotify API, HTML, CSS, JavaScript

[GitHub](#) 🔗

- Constructed a music exploration and playlist management web application using **Flask**, **Spotify API**, and a responsive front-end with **HTML**, **CSS**, and **JavaScript**, enhancing user engagement through interactive features
- Implemented advanced filtering to create mood-based playlists by analyzing Spotify's audio metrics and comparing them against datasets with hundreds of songs, enabling personalized music recommendations

### ReelViews | TMDb API, Express.js, MongoDB, HTML, CSS, JavaScript

[GitHub](#) 🔗

- Built a full-stack web application with a responsive frontend using **HTML**, **CSS**, and **JavaScript**, allowing users to view the latest movie releases, search for any movie, and post reviews
- Utilized **The Movie Database API** alongside backend functionality implemented with **Express.js** and **MongoDB**, enabling efficient data handling and dynamic user interactions

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, C/C++, JavaScript, TypeScript, HTML, CSS, SQL

**Frameworks and Libraries:** React, Pandas, NumPy, Jest, Flask, JUnit, Svelte, Flutter, Node.js, Express.js

**Software Tools:** AWS, Docker, Linux/Unix, MongoDB, PlanetScale, Git, Microsoft Office

