

Abhi Verma

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Education

University of British Columbia

Expected Graduation: May 2026

Bachelor of Applied Science - Computer Engineering

- Trek Excellence Scholarship – Awarded for being in top 5% of Engineering faculty

Experience

UBC x AWS Cloud Innovation Centre

Vancouver, BC

Software Developer Co-op

May 2024 – Present

- Developed a web application using **AWS CDK** in **TypeScript** for infrastructure as code that leverages **generative AI** and **NLP** to simplify access to the Stewart Blusson Quantum Matter Institute's research in quantum matter.
- Enabled multi-tenant **Retrieval-Augmented Generation** by utilizing **PGVector** for efficient storage and querying of embedding vectors, achieving **25%** faster **LLM** 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 within a diverse team of developers and stakeholders, presenting technical solutions and documenting each phase to ensure smooth deployment

UBC Launch Pad

Vancouver, BC

Software Developer

January 2023 – Present

- Utilized **AWS S3** and **Svelte** to implement a web application used for efficient document management, improving accessibility and organization of Launch Pad's resources
- Incorporated an intermediary **PlanetScale SQL** database to store documents' metadata allowing for the ability to query, search, and filter sensitive information
- Created responsive frontends for web and mobile applications with **React**, **Flutter**, **Material UI** and **Tailwind CSS**, enhancing user interaction.

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 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 app utilizing Flask, Spotify API, and a responsive front-end made with HTML, CSS, and JavaScript to elevate user engagement
- Produced features for exploring, creating, and filtering playlists, as well as finding similar songs based on user preferences

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

