

Kartikeya Chaturvedi

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EDUCATION

University of British Columbia

Bachelor of Science in Computer Science; Minor in Economics

- Dean's List Honour - 2021/22

CFA Level 1 Candidate

Vancouver, BC

May 2026

August 2026

PROFESSIONAL EXPERIENCE

MicroLabs

Microsoft Business Central Technical Consultant Intern

- Built and deployed Business Central extensions in **AL**; supported QA for live projects through code reviews, functional testing, and defect triage. Assisted with **API/web service integrations** to connect Business Central with external systems; validated endpoints and data flows across environments.
- Supported sprint delivery by maintaining implementation docs, test evidence, and release notes for stakeholder sign-off; created **Power BI dashboards** to track system performance and user engagement.

Singapore

Jan – April 2025

MH Alshaya

Software Engineering Intern

- Delivered two checkout flow pages for e-commerce app, Aura, within sprint timelines, coordinating with teammates to ensure QA readiness and smooth releases. Developed API endpoints to support cart/product data and collaborated with stakeholders to implement requirements accurately.
- Utilized **React Native** for front-end development and **Redux** for state management, ensuring users' carts remained consistent throughout the checkout process. Employed **Firebase** as a real-time database for product inventory and to store order details at the checkout page.

Dubai, UAE

May - Aug 2022

PROJECTS

Equity Research Pipeline

- Built a Python-based pipeline for equity strategy research. Ingested and cached daily OHLCV data in Parquet.
- Developed LSTM-based return forecasting models for 5-day forward equity returns using **pandas** and **NumPy**; integrated predictions into a weekly Top-N long-only portfolio construction framework with T+1 execution.
- Modeled turnover-based transaction costs and applied volatility targeting to make backtests more realistic.
- Applied mean-variance optimization using **CVXPY** for portfolio construction, incorporating return forecasts, covariance estimates, and position constraints to generate optimal long-only weights; evaluated strategy performance by running multi-year out-of-sample tests, using Sharpe ratio and alpha relative to QQQ benchmark.
- Added run manifests, data fingerprints, profiling outputs, and CI tests to improve reproducibility and workflow reliability.
- Developed in a **Unix**-based environment with **Bash** scripting for pipeline scheduling and execution automation.

Nov 2025 – Present

Fine-Tuning Whisper for 'Hinglish' Speech

- Curated Hinglish podcast audio and built JSON ground-truth transcripts; preprocessed to 16 kHz log-Mel features with WhisperProcessor; Fine-tuned **openai/whisper-small** on ~100 hours using Hugging Face Trainer (fp16, grad accumulation) and evaluated with WER.
- Built production-style inference: 30s chunking with overlap + pyannote.audio diarization, and computed speaker-aware WER by aligning diarized segments to ground truth.

May – June 2025

Query Engine for UBC Grades (InsightUBC)

- Built a platform that allows users to browse through a dataset of various UBC courses and their historical grades.
- Used **Node.js** for backend processing of **SQL** queries entered by users. Displayed course data using the **D3.js** library.
- Implemented **RESTful APIs** for dynamic data interaction, tested in **Postman**. **HTML5**, **CSS**, and **JavaScript** for frontend.
- Utilized **Agile methodologies** for planning and managing the project, tracked and visualized progress using **JIRA**.
- Implemented **Test-Driven Development (TDD)**, followed by unit and integration testing using **Chai-as-promised**.

Jan - Apr 2024

SKILLS

Programming Languages:

C/C++, Java, Python, JavaScript/TypeScript, React Native,

Databases/Software:

Oracle, MySQL, Firebase, Redux

Web:

HTML, CSS, Node.js, React.js, RESTful API, Three.js, PHP

Tools/Testing:

MS Excel, JIRA, Git, Postman, GDB, JUnit, Linux/Unix, Bash

Coursework:

Operating Systems, DSA, Concurrent Programming, Probability & Statistics