Simar Kandola

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EDUCATION

University of Calgary Calgary, AB
Bachelor of Science in Software Engineering - GPA: 3.94 *Sept 2023 – April 2028*

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Full-Stack Web Development, Operating Systems, Networked Systems, Software Architecture, Testing

TECHNICAL SKILLS

Languages: C#/.NET, C/C++, Java, Python, JavaScript, TypeScript, SQL, NoSQL
Frameworks/Libraries: React, Angular, Node.js, Next.js, Express.js, PostgreSQL, MSSQL, DynamoDB, Jasmine/Karma, Jest, Tailwind, Pandas, NumPy, Scikit-Learn, Matplotlib
Dev/Cloud Tools: Git, GitHub, VS Code, Jupyter, Microsoft SQL Server Studio, Tableau, Docker, Kubernetes, OCP4, AWS, Vercel, Snowflake, IBM DataStage, Linux, Bash

EXPERIENCE

Software Development Intern May 2025 – Aug 2025
Royal Bank of Canada (RBC) *Toronto, ON*

- Delivered a production-ready **CRM fee reconciliation app**, supporting **3M+ transaction records** with a responsive **Angular (NgRx)** UI and scalable **Node.js/Express** backend.
- Enhanced application security by integrating **OAuth 2.0 with PKCE**, enabling token exchange and **JWT-based** session management for 200+ internal users.
- Built ETL pipelines in IBM DataStage to migrate MSSQL/DB2 data into **Snowflake**, improving report latency and simplifying downstream analytics.

Undergraduate Research Intern May 2024 – Aug 2024
University of Calgary *Calgary, AB*

- Applied **Latent Dirichlet Allocation (LDA)** and **Non-negative Matrix Factorization (NMF)** for unsupervised **topic modeling** on 10k+ Stack Exchange discussions, uncovering ethical themes among developers.
- Engineered preprocessing pipelines (tokenization, lemmatization, TF–IDF vectorization) to optimize topic model performance, increasing **topic coherence scores by 20%**.
- Performed **sentiment analysis** data using **TextBlob**, to derive polarity and subjectivity, then visualized trends with **Matplotlib** and **Seaborn** to identify patterns in developer perspectives on ethical issues.

PROJECTS

Solar-Car Telemetry Dashboard Oct 2024 – Present
UCalgary Solar Car *Calgary, AB*

- Built a **real-time telemetry dashboard** in **React.js, Node.js, Express, and AWS DynamoDB**, streaming and visualizing data from **10+ sensors** with server-side filtering for efficient handling.
- Developed and optimized scalable **Node.js/Express REST APIs** for telemetry ingestion and querying, reliably processing **100+ daily race events**.
- Maintained and expanded the team's official website (calgarysolarcar.ca) using the **T3 stack** (React, Node.js, Prisma, Supabase, Clerk), building database schemas and UI components for **70+ team members**.

Hackathon Management Website May 2024 – Present
Code the Change YYC *Calgary, AB*

- Delivered the organization's official hackathon platform (hackthechangeyyc.ca) using **React.js, Node.js, Express, and AWS DynamoDB**, supporting **200+ teams** and **500+ event users**.
- Developed a role-based judging system with rubric-driven automated scoring and real-time dashboards, enabling **100+ concurrent judges** and reducing evaluation time by **40%**.
- Optimized judging portal APIs (Node.js, Express) by implementing pagination and score retrieval caching, reducing average query time by **45%** and scaling to **1000+ participants** during peak traffic.