

Syed Essam Uddin Khawaja

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TECHNICAL SKILLS

- **Languages:** Python, TypeScript, JavaScript, SQL, Java, C
- **Tools, Libraries, and Frameworks:** React, Next.js, FastAPI, Power BI, Supabase, Git, PostgreSQL, Node.js, AWS, REST API, Jira
- **ML/AI and Data Science:** TensorFlow, Keras, LLMs, Pandas, NumPy, scikit-learn

EDUCATION

Bachelor of Science with Honours, Major in Computer Science

Sep 2024 – Present

University of Calgary, Alberta

- Minor in Data Science, Concentration in Visualization and Analytics, President's Admission Scholarship, Dean's Admission Scholarship
- Current CGPA: 3.85
- Highlighted Courses: Database Management Systems, Intro to Software Engineering, Computing Machinery, Explorations in Information Security and Privacy, Computational Statistical Modelling, Thinking with Data

Additional Certifications:

- MIT x IDSS Data Science and Machine Learning: Making Data-Driven Decisions

EXPERIENCE

Student Full Stack Developer, Code The Change YYC, Calgary, Alberta

Feb 2026 - Present

- Architected a full-stack hackathon management platform using Next.js, tRPC, and PostgreSQL via Supabase, supporting both participant and admin workflows
- Defined user stories and feature scope for the admin panel, translating requirements into sprint-ready tickets in Jira
- Followed production-grade GitHub workflows with feature branches, PR reviews, and CI practices across a collaborative team

Founder and Web Developer at CRTStack, Calgary, Alberta

Dec 2024 - Aug 2025

- Founded a digital media agency delivering web development and motion graphics for small business clients
- Built a full e-commerce platform for a bakery client using Next.js, TypeScript, and Tailwind CSS, including product catalog and checkout integration
- Delivered high-performance landing pages and portfolio sites for startups, owning projects end-to-end from scoping to deployment

Data Analyst Intern, Aventi Global Unlimited, London Area, United Kingdom, *Remote*

Aug 2023 – Sept 2023

- Built client acquisition and outreach dashboards in Power BI, improving data visibility for senior decision-makers
- Diagnosed and resolved API integration failures, enabling real-time data sync across reporting pipelines
- Presented findings directly to stakeholders and shaped targeted outreach strategy during peak sales periods

PERSONAL PROJECTS

SwiftApply - AI Chrome Extension Job App Assistant

(TypeScript, React, Gemini Nano API, Chrome Extension)

- Built a Chrome extension that parses job postings and generates personalized cover letters on-device using Gemini Nano's Prompt API, with auto-fill and job match features cutting application time by 50%
- Ran iterative user testing with peers, collecting structured written feedback across multiple versions to drive decisions
- Chose on-device inference deliberately to avoid sending sensitive job application data to external servers, making privacy a core design constraint

SilentSpeak – Real-Time Sign Language Translator [[Live Demo](#)]

(Python, TensorFlow, TypeScript, Next.js, MediaPipe)

- Engineered a deep learning pipeline with batch normalization, dropout regularization (30%), and adaptive learning rate scheduling, reducing validation loss from 2.95 to 0.19 over 100 epochs
- Deployed a real-time web app translating sign language for deaf users, achieving 85%+ prediction confidence
- Designed the full system architecture independently, from data preprocessing and model training to API integration and frontend deployment

Cochrane Tourism Strategy - Data-Driven Destination Planning [[Demo](#)] *(Python, Geospatial Analysis, Data Analytics)*

- Analyzed 136K+ tourist device records using affinity analysis to surface high-value visitor behavior patterns (31x liquor, 15x grocery, 12x fitness uplift)
- Produced a strategic roadmap projecting \$1.5–2.3M in annual revenue opportunity by repositioning Cochrane as a 90+ minute destination
- Presented findings as a structured report with geospatial visualizations, translating raw behavioral data into concrete retail and infrastructure recommendations

Bank Subscription Prediction – Kaggle Competition *(Python, CatBoost, XGBoost, Scikit-learn, Feature Engineering)*

- Achieved ROC AUC of 0.961 (top 5%) by ensembling gradient boosting models with Bayesian hyperparameter optimization
- Conducted EDA with 10+ visualizations and applied stratified sampling to address class imbalance
- Iterated through multiple feature engineering strategies, including interaction terms and target encoding, to maximize model signal

STUDENT LEADERSHIP EXPERIENCE

Director of Events

Sep 2024 - Present

Muslims of Southern Alberta Initiating Change, Calgary, Alberta

- Led a 5-person team to plan and execute community-focused events, coordinating logistics, venues, and volunteer scheduling across multiple concurrent initiatives
- Established formal partnerships with local non-profit organizations to create structured, recurring volunteering opportunities for students
- Built an open-access digital sign-up system from scratch, enabling any student to discover and register for volunteering opportunities without barriers

University of Calgary Computer Science Undergraduate Society Academic and Resources Executive

Dec 2025 - Present

University of Calgary Computer Science Department, Calgary, Alberta

- Coordinated the largest city-wide hackathon in Calgary with 400+ attendees, managing judging logistics, volunteer coordination, and day-of operations across a multi-team organizing committee
- Secured 6 industry sponsors for the hackathon, handling outreach, pitch materials, and sponsor communications
- Partnered with faculty and department leadership to develop workshops and academic resources, supporting events with 100+ student attendees
- Acted as a direct point of contact between students and the CS department, surfacing feedback and advocating for improved academic support structures