Karan Gosal

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Education

University of Victoria, BC Sept 2021 – Dec 2025
Bachelor of Software Engineering (GPA: 8.67/9.0)

Langara College, BC Sept 2017 – Dec 2019
Computer Science and Technology Diploma

Experience

Full Stack Developer – Co-op August 2023 – April 2024
Advanced Research Computing Dev Team, University Systems, Victoria, BC

- Boosted page performance by 62% in the ZooDB web application (Django + PostgreSQL) by implementing Redis caching using cache-aside and write-back strategies, enabling faster access to zooarchaeological bone data
- Reduced database query load by 55% by integrating Celery to handle asynchronous tasks, significantly improving backend throughput and user experience
- Partnered with clients to understand project goals and delivered UI/UX design enhancements that aligned with user needs and increased stakeholder satisfaction

Quality Assurance Analyst – Co-op May 2023 – Aug 2023
VertiGIS, Victoria, BC

- Executed 100+ manual and automated QA tests across functional, regression, and integration types; managed test cycles and CI builds using Azure DevOps
- Built and maintained 60+ automated test scripts with TypeScript, WebdriverIO, Mocha, and Chai; improved suite performance by migrating to async API, reducing flakiness and runtime

Technical Skills

Languages: Python, TypeScript, Java, C/C++, Bash, Assembly, SQL (MySQL, PostgreSQL), HTML/CSS

Frameworks & Libraries: Django, React, Node.js, Express.js, WebdriverIO, Mocha, Chai

Tools & Technologies: Git, Docker, Kubernetes, Redis, Celery, Azure DevOps, REST APIs, Linux, Agile Methodology

Certifications: AWS Certified Cloud Practitioner, MATLAB Onramp

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, Database Systems, Software Engineering, Machine Learning & Data Mining, Fundamentals of Artificial Intelligence

Projects, Leadership & Volunteer Experience

Smart Lighting Automation System – Personal Project

- Designed and built a smart outdoor lighting system using Arduino, RTC, and relays with date-based automation; engineered fault-tolerant circuits through soldering and testing, significantly reducing power consumption

Orientation Leader – University of Victoria

- Independently led orientation for a group of 50+ new students, facilitating campus tours and coordinating community-building activities to ensure a smooth and inclusive transition

Member – VikeSec (UVic Cybersecurity Club)

- Participated in vikeCTF 2023 hosted by VikeSec and engaged in workshops on web security and ethical hacking, strengthening practical cybersecurity skills