

Guneet Kaur

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EDUCATION

University of Alberta

Bachelor of Science in Computer Science (Specialization)

Edmonton, Alberta

Sept. 2023 – Aug. 2027 (Expected)

EXPERIENCE

UR2PhD Scholar

Department of Computing Science, University of Alberta

Sept 2025 – Present

Edmonton, AB

- Developing Python/C++ tools for TAR/ZIP analysis with content-defined chunking, targeting 30% duplicate data reduction.
- Researching deduplication algorithms with Dr. Paul Lu, culminating in a seminar and project report.

Full Stack Developer

Daylily* AI (Daylily Software Inc.)

Aug 2025 – Present

Remote

- Collaborating with clients to gather requirements and translate them into tailored AI-driven web solutions.
- Building and deploying full-stack features to enhance customer engagement and product scalability.

Research Intern

School of Mathematics and Computer Science, Indian Institute of Technology Goa (IIT Goa)

May 2025 – July 2025

Goa, India

- Developed 3+ control algorithms for flow battery management, reducing energy loss simulations by 25%.
- Collaborated on research for programmable flow systems, aiming for future IEEE publication.

Teaching Assistant

Department of Computing Science, University of Alberta

Jan. 2025 – Present

Edmonton, Alberta

- Graded 400+ assignments and led 35 labs, improving student averages by 15%.
- Cut grading turnaround from 4 to 1.5 days using Python automation scripts.

ACHIEVEMENTS

natIgnite Hackathon - 1st Place, \$6,000 in seed funding

Network for Applied Technology (NAT)

August 2025

Edmonton, Alberta

- Built TrustLine, a real-time deepfake scam-call detector with React Native and FastAPI.

DevCon Hackathon - 2nd Place, \$1,000 cash prize

Edmonton Unlimited

March 2025

Edmonton, Alberta

- Built RideSafe, a real-time transit safety app with ViT-based threat detection using React Native & Flask.

PROJECTS

Signal Vault | Python, JS, HTML/CSS, Node.js

May 2025 - Present

- Developing an offline-first search engine supporting emergency access for 100+ terms during outages.
- Achieved 90% faster search response via optimized localStorage-based caching system.

SWC Website (Client) | React, Tailwind CSS, Firebase

May 2025 - Present

- Delivering a responsive automotive website with 15+ dynamic pages across car listings and services.
- Integrated CMS with Firebase to support real-time updates by non-technical staff.

Bias Visualizer Chrome Extension | JavaScript, HTML/CSS, FastAPI, Python

May 2025

- Built Chrome extension to compare 30+ trending terms across Google Trends and Reddit.
- Enabled real-time text analysis with a FastAPI backend processing 500 queries/sec.

3D Ray Tracing Renderer | C, Makefile

Sept. 2024 – Dec. 2024

- Built ray tracing engine supporting 7+ object types and realistic lighting in less than 20ms/frame.

TECHNICAL SKILLS

Languages: Python, Java, C, SQL, HTML/CSS, JavaScript, TypeScript, R

Frameworks: React Native, Node.js, React, Express, Flask, FastAPI

Developer Tools: Git, Visual Studio Code, Bitbucket, Makefile, Docker, Linux, AWS, Google Cloud

Testing/QA: Automated testing (unit, integration, regression), test strategies, CI/CD pipelines, QA concepts

Collaboration: QA/DevOps collaboration on debugging, automation, distributed systems, and REST APIs