Dhruv Khanna

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EDUCATION

University of British Columbia   Vancouver, BC
Bachelor of Science in Computer Science, Minor in Commerce   *2020 – 2025*
Relevant Coursework: Machine Learning and Data Mining, Object-Oriented Software Construction, Algorithms & Data Structures, Advanced Relational Databases, Operating Systems, Randomized Algorithms, Strategic Management, Business Finance, Financial Accounting, Business Processes and Operations

EXPERIENCE

Full Stack Engineer   November 2025 – Present
Critical Insights, Vancouver, BC
- Built parent-facing interfaces for an ICU/NICU healthcare platform, focusing on secure, reliable, and intuitive experiences for non-technical users.
- Developed React-based dashboards supporting authentication, privacy controls, messaging, and educational content.
- Implemented Node.js REST APIs for parent onboarding, role-based access control (RBAC), hospital-level data isolation, and patient associations.
- Developed a Retrieval-Augmented Generation (RAG) chatbot to help parents navigate the platform and access FAQs using vector search, prompt design, and context management over curated hospital content.
- Implemented secure, low-latency live video streaming for parent access to bedside camera feeds with hospital-configurable privacy policies.

Software Engineering Intern   June 2025 – December 2025
NewGen Software, Remote
- Completed training in advanced AI technologies including Retrieval-Augmented Generation (RAG), Agentic AI, and Natural Language Processing (NLP).
- Scoped a personal AI-focused project under the mentorship of a Senior Data Scientist working on *Lumyn*, a core NewGen product.
- Researched advanced architectural patterns for building intelligent agents and AI pipelines using open-source LLM tools and vector databases.

PROJECTS

Digital Asset Management Platform   —   for Associated Engineering
Fullstack Lead - CPSC 319   *.NET 8, C#, Azure, React, xUnit*
- Led full-stack development in a team of 8, managing 2 direct reports and coordinating delivery with client AE.
- Architected and implemented .NET APIs for metadata handling, file uploads, and role-based access control.
- Developed React front-end with dynamic search, filters, & admin workflows, deployed via Azure Static Web Apps.
- Implemented image upload pipelines, metadata-driven search, compression, and automated archival workflows.
- Integrated Azure SQL and Blob Storage; ensured end-to-end functionality, security, and deployment readiness. **Reduced file access time by 60% in client use.**
- Wrote tests in xUnit and configured CI/CD with GitHub Actions; delivered project with post-deployment warranty.

BuyWise – Smart Shopping Assistant   Node.js, React, Docker, REST APIs, NLP
University of British Columbia – CPSC 455
- Collaborated in a team of 4 to develop a full-stack application that parses natural language queries and aggregates product data from Amazon, Walmart, and Kijiji.
- Designed and implemented modular REST APIs using Node.js for query parsing, product aggregation, and user preference handling.
- Built a dynamic React front-end supporting real-time search, filtering, and personalized recommendation modules.
- Containerized the application using Docker and orchestrated services with `docker-compose` to streamline deployment and scalability.
- Integrated AI-driven ranking logic leveraging semantic analysis and user history to optimize search relevance.

TECHNICAL SKILLS

Languages: C#, Java, Python, TypeScript, JavaScript, SQL, HTML, CSS
Frameworks: .NET 8, React, Next.js, Flask, Tailwind CSS, PHP, Node.js
Databases: Azure SQL, Oracle DB, MySQL, JSON