

Manav Patel

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EDUCATION

University of Calgary

Calgary, Alberta

Bachelor of Science in Computer Science | GPA **3.92/4.0** (Dean's List 2023-2025)

Sept. 2023 – April 2027

Coursework: Data Structures & Algorithms, Software Engineering, Databases, DevOps, AI/ML, Cybersecurity

Awards: Continuing Education Scholarship (\$5,000), Robert Jane Distinguished Bursary (\$3,000), PURE Award (\$7,500)

EXPERIENCE

Software Development Intern | Studeo

Sep 2025 – Present

- Designed and deployed n8n-based automations with Clay tables, eliminating **5 hours/week** of manual lead enrichment by employing **multi-step workflow execution**
- Partnered with the CEO to improve workflow orchestration, increasing outreach by **60+ new members**

Deputy Vice-President | The Cyber Security Club

Jul 2024 – Present

- Enabled rapid, scalable deployment of **40+ CTF challenges** by implementing **Docker containerization** across **multiple national hackathons**, resulting in improved environment stability for **70+ teams**
- Maintained **zero downtime** and supported **100+ teams** during major club events by provisioning **AWS EC2** instances with fault-tolerant architecture, enhancing reliability for club websites serving **1,700+ members**

Software Development Engineer | Independent Professional

Apr 2025 – Aug 2025

- Spearheaded developments to build scalable infrastructure and deployment automation on **Azure DevOps** to support high-profile national events (by **Mastercard, Enfocom**), handling up to **500** participants
- Achieved **35%** reduction in QA cycles and improved system reliability across competition environments by authoring **20+** build and validation scripts for automated challenge testing and deployment
- Engineered **end-to-end CI/CD** workflows leveraging **Docker**, resulting in a **30%** reduction in deployment time

Software Development Research Intern | University of Calgary

May 2025 – Aug 2025

- Selected as a research intern among **200+ applicants** to develop **optimized C++ algorithms** to facilitate **large-scale tabulation** of cubic number fields beyond the **1,000,000 fields** covered in 1990
- Instituted Baby-Step Giant-Step optimizations achieving **$O(\sqrt{n})$** improvement, reducing compute time by **71 days**

Machine Learning Research Intern | Vision Research Lab

Apr 2024 – Jun 2024

- Led a **6 member team** in developing a **sentiment analysis model** designed to jointly analyze **multi-modal inputs** from social media, achieving **80% accuracy** in overall **contextual sentiment prediction**
- Developed and optimized data preprocessing and augmentation pipelines, applied **hyperparameter tuning** and **regularization** techniques to mitigate overfitting, resulting in a **17%** increase in model prediction accuracy
- Leveraged advanced **LLM Model Ensemble** techniques and integrated **CLIP Vision-Transformer** to jointly analyze **multi-modal inputs**

PROJECTS

Athletica | Java, SpringBoot, PostMan, Gemini API, RabbitMQ, Keycloak, AWS, MongoDB

Jul 2025 – Present

- Microservice fitness app with **Spring Cloud** components (**API Gateway**, **Eureka** service discovery, **Config Server**); **Keycloak** OAuth2/OpenID Connect for auth and role management
- Async messaging via **RabbitMQ** to decouple AI recommendation workers (Gemini) from user-facing services

NutriSync | Python, Flask, React, TypeScript, NodeJS, PostgreSQL, psycopg2, Scikit-Learn

Apr 2025

- Directed a 4-member team to build a **full-stack** recipe management system with a **REST API**, **role-based** access levels (member, moderator, admin), **session-based** access control, and automatic URL redirection
- Built a personalized recipe recommender with scikit-learn; achieved 85% positive feedback across 250+ reviews

Game Center | Java, Maven, Figma, JUnit, JavaFX, SceneBuilder, CSS

Jan 2025 – Mar 2025

- Led a **10 member** software engineering team in designing and delivering a scalable **game hub platform** with a fully functional **matchmaking system** and a database management system enabling users to play multiple games
- Authored **75+** unit, integration, and end-to-end tests using **JUnit**, achieving **90%+ code** test coverage

TECHNICAL SKILLS

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

Developer Tools, Frameworks & Libraries: Spring Boot, Flask, React, Node.js, Azure DevOps, AWS, RabbitMQ, Keycloak, n8n, ASP.NET, PyTorch, TensorFlow, scikit-learn, pandas, Docker, Git, Linux/Unix, Tailwind CSS, PostMan, Figma, JUnit