ADITYA PATEL

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EDUCATION

Bachelor of Science in Computing Science   Edmonton, AB

University of Alberta   Expected Graduation: 2027

Relevant Courses: Introduction to File and Database Management | Algorithms | Machine Learning | Computer Organization and Architecture | Introduction to Software Engineering

EXPERIENCE

AI Software Developer Intern   Remote

JuliGerm   Apr 2025 - Aug 2025

- Developed and maintained AI-powered backend systems for agricultural data analysis, including a search engine to track crop health, soil quality, water usage, and other key farming indicators.
- Integrated local weather and satellite data to deliver predictive insights for farmers, and deployed solutions on Microsoft Azure for scalability and reliability.

AI, Software Development Intern   Edmonton, AB

MedXAI   July 2024 - August 2025

- Developed a generative model with 90% accuracy to predict future COVID-19 trends using data from Worldometer.
- Implemented a classification model to analyze and identify trends in COVID-19 case data.
- Designed and built visualizations, including plots and graphs, to present current and predicted trends effectively.
- Conducted in-depth data analysis on over 100 datasets to uncover artificial trends, resulting in actionable insights for improved forecasting.

ML, Web Development Intern   Edmonton, AB

UAIS (Undergraduate Artificial Intelligence Society)   January 2024 - April 2024

- Developed and integrated ML and NLP models for industrial risk report analysis, achieving 85% accuracy.
- Implemented OpenAI API for report generation, reducing manual effort by 40%.
- Optimized large datasets using advanced preprocessing techniques like PCA and feature scaling, improving model efficiency by 10% and boosting risk prediction accuracy by ~20%.
- Collaborated with the team to deliver AI-driven safety solutions, ensuring easy adoption by non-technical users.

Web Development Intern   Ahmedabad, IN

Astha Maternity And Nursing Home   April 2023 - July 2023

- Developed a high-performance backend patient management system, optimizing database indexing and queries, reducing response time by 50% (from ~450ms to ~200ms).
- Utilized technologies such as Flask, Django, HTML, CSS, and JavaScript to build the system.
- Optimized page load times (~250 ms) and implemented SEO best practices to increase website traffic.

PROJECTS

BearBazaar: A campus marketplace | React.js, Express.js, Prisma, SQLite, Node.js, REST API   Edmonton, AB

HackED 2025 | Github Repo: github.com/adityadipakpatel/BearBazaar   February 2025

- Developed a full-stack web app for campus product listings with React.js frontend and Express.js + Prisma + SQL backend.
- Designed RESTful APIs for authentication, product management, and direct messaging with real-time updates.
- Implemented secure credential updates, profile images, and optimized database queries for efficiency.

Resume Parser, LaTeX PDF Generator | Python, JavaScript, HTML, CSS, LLM API, PdfLatex API   Edmonton, AB

GHacks 2024   August 2024

- Led a team in developing a resume parser and LaTeX PDF generator during the Google Developer Student Club (GDSC) Hackathon. The project allowed users to input resume details via a web interface, which were parsed using an LLM API to generate a PDF using a LaTeX template.
- Implemented backend features to convert user inputs into a LaTeX format using Python and pdflatex, and built the frontend interface with HTML, CSS, and JavaScript.
- Coordinated API integration for LLM text parsing, ensuring seamless interaction between the frontend and backend systems.

RareQuest: Disease Awareness Game | HTML, CSS, JavaScript   Montreal, QC

Code to Give (Morgan Stanley) 2024 | Github Repo: github.com/adityadipakpatel/RQMO12   May 2024

- Developed RareQuest during the "Code to Give" Hackathon to raise awareness about rare diseases.
- Implemented game mechanics and challenges in JavaScript to educate players about diagnosing rare illnesses.
- Utilized front-end design and back-end logic to create an interactive 2D game map.
- Managed database operations to track player progress and game data.

Sign Language Detector Project | OpenCV, TensorFlow, Python, Jupyter Notebooks   Edmonton, AB

HackED 2024 | Github Repo: github.com/adityadipakpatel/Sign-Language-Detector   January 2024

- Developed a real-time sign language detection web app using TensorFlow, Computer Vision, Object Detection, Python, and Deep Learning SSD.
- Developed a real-time system to interpret sign language gestures into alphabets and words, enabling digital communication for Deaf and Mute individuals.
- Achieved 90% accuracy in gesture recognition, improving communication speed and efficiency.

EXTRACURRICULAR PROJECTS

CryptoHash: Cryptographic Algorithm (SHA256) Implementation Project | Python, Cryptography Algorithms, Cybersecurity principles

- Implemented the SHA256 algorithm in Python to produce 256-bit hash values from user-provided messages, demonstrating strong skills in cryptography, cybersecurity, and software development with a clear focus on security.
- Demonstrated adeptness in system administration by ensuring compatibility with the SHA256 command-line utility in Unix/Linux environments.

WeatherSage: Weather Information Retriever Project | Python, API (fetching weather data), JSON (data interchange)

- Fetched weather data using OpenWeatherMap API.
- Utilized Python to make API requests, process user inputs, and manage API responses.
- Extracted and processed JSON data, performed file operations, and gained hands-on experience in Python scripting and API integration.

SecureText: Text Encryption Tool | Python, Cryptography concepts and algorithms, Security principles

- Developed SecureText, a tool that allows users to encrypt and decrypt text using a two-step process with two passcodes, ensuring security and privacy.
- Implemented encryption and decryption scripts in Python to convert text into long numeric strings and retrieve the original text with corresponding passcodes.
- Demonstrated proficiency in cryptography by ensuring data integrity and protecting sensitive information during transmission.

TECHNICAL SKILLS

Languages/Frameworks: Python, Java, JavaScript, SQL, C, C++, HTML, SQL, RISC-V, Django, Flask
Dev Tools/Technologies: Android Studio, Postman, Git, GitHub, Version Control Systems, ML, Web, Cloud, Networking, OOPs, Data Structures & Algorithms
Interpersonal Skills: Time Management, Team Management, Leadership, Teamwork, Adaptability, Communication Skills