

# KARAN PATEL

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## EDUCATION

**Bachelor of Computer Science**, Carleton University | 3.9 GPA

Sept 2021 - May 2025

- Pursuing a Specialization in Software Engineering and Minor in Business with **\$16000** scholarship.
- Related Coursework: Abstract Data Types and Algorithms, Discrete Structures I/II, Calculus, Linear Algebra, etc.

## EXPERIENCE

**Software Engineering Intern**, Capital One, *New York City, NY*

Jun 2023 - Aug 2023

- Worked With Capital One's Payments Intelligence Team to design and implement new features leveraging technologies and tools like AWS(ECS, EC2, Lambda, RDS, DynamoDB, Fargate), Docker, Redis and Python
- Orchestrated a pivotal project involving the seamless migration of the credit card transaction cache system from Redis to DynamoDB, yielding a remarkable annual saving of **\$100K** in Amazon Web Services expenses
- Led the redesign and seamless implementation of a cache system, achieving millisecond-level latency for our ML model and accommodating a staggering volume of over **180 billion** transactions annually
- Played an integral role in fostering an Agile development ecosystem, actively engaging in daily stand-ups, sprint planning, and rigorous code reviews, resulting in the consistent delivery of high-calibre software products

**Teaching Assistant**, Carleton University, *Ottawa, ON*

Jan 2023 - May 2023

- Leveraged extensive proficiency in Java programming to excel as a Teaching Assistant in the "Intro to Object-Oriented Programming in Java" course at Carleton University
- Demonstrated a solid foundation in Java programming, enhancing problem-solving and critical-thinking skills, and effectively communicating complex ideas to learners

**Software Developer Intern**, Ideabytes Inc, *Ottawa, ON*

Jan 2022 - Sept 2022

- Successfully contributed to a multitude of dynamic, fast-paced projects, leveraging a diverse skill set that includes Python, Java, Spring Boot, and AWS technologies
- Pioneered the integration of impactful features, including dynamic website components, intelligent spell check functionality, and automated PDF generation, enriching user interactions and document processing capabilities
- Elevated the performance of the RESTful API, significantly reducing response time from **2.6** seconds to a swift **0.9** seconds per request, optimizing overall system efficiency and responsiveness

## PROJECTS

**Pathfinding Visualizer** | Javascript, HTML/CSS

- Created a application to help visualize path finding algorithms
- Implemented Dijkstra's, A\*, Breadth First Search, and Depth First Search Algorithms to be visualized

**Heart Rate Variability device** | C++, QT Framework, SQL

- Designed computer software for a standalone device called HeartWave that measures, analyzes, and displays HRV patterns through the use of an advanced heart rate monitor
- Provided real-time biofeedback to users on their coherence levels to help reduce stress and achieve an optimal psychophysiological state of well-being and health
- Implemented the project using C++ and the Qt framework to create interactive UI and utilized SQL to save patterns and sessions for later analysis

**Password Manager Web Application** | Java, Spring Boot, Postgres SQL, HTML/CSS, Thyme-leaf,

- Built a secure password manager application to help store daily passwords
- Encrypted the application and user details with Spring Security, login authentication and email verification
- Deployed Application in the Cloud and used Postgre SQL as primary database

## SKILLS

**Languages**

Python, Java, HTML, CSS, JavaScript, SQL, C

**Tools/Frameworks**

AWS, Git, Jira, Docker, Kubernetes, Spring Boot, Distributed Systems, CI/CD

**Soft Skills**

Agile methodology, Communication, Time management, Teamwork, Leadership