

Zarif Khan

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Education

Carleton University

Bachelor of Engineering in Software Engineering : Department of Computer Systems Engineering (3.5/4.0 GPA)

Ottawa ON

Graduating 2025

Soft Skills

- Leadership
- Positive and solution-oriented mindset
- Creative problem-solver
- Organized
- Self-managing
- Good communication skills

Technical Skills

- **Proficient Languages:** Java, C/C++, Python, SQL, HTML, CSS, jQuery
- **Databases:** PostgreSQL, Hibernate(H2)
- **Software Development:** Spring Framework, Spring-boot, Software Development Life Cycle (SDLC), Software Architectures/ Design Patterns, Infrastructure & networks, Cyber security principles, React Framework, Internetworks
- **Developer Tools:** Linux, GitHub, Azure, VS code, IntelliJ, pgAdmin, Docker, CI/CD
- **Other:** MS Word, MS Office, Embedded Systems, Real Time Systems, VirtualBox



Relevant Courses

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|-----------------------------------|---------------------------------|-------------------------------------|
| • Intro To Machine Learning | • Software Validation (Testing) | • Software Econ./Project Management |
| • Software and Network Security | • Operating Systems | • Object-Oriented Software |
| • Applied Cryptography | • Database Management Systems | • Design and Analysis of |
| • Computer Vision | • Intro to Real-Time Systems | Engineering Experiments |
| • Networking – LAN/MAN/WAN | • Real-Time concurrent systems | • Professional Practice of |
| • SaaS development and deployment | • Software Architecture | Engineering |



Experience

Researcher and Software Engineer|| Video-Based Action Captioning and for Neonatal Resuscitation

CHEO & Ottawa General Hospital, Ottawa, ON

Fall, 2024

- Drafted and edited 117-page technical engineering report for internal and external stakeholders.
- Conducted requirement elicitation with external stakeholders, including medical professionals, to guide project direction.
- Performed frequent trouble shooting on our AI codebase to maintain and reconcile with repository updates.
- Developed a dataset to determine performance outputs to adjust our AI model, achieving 75% accuracy in 2 months.
- Integrated model using a real-time Intel-RealSense D435 to provide real-time operation recognition with minimal delay



Projects

Lead Software Engineer and Database Architect || Amazin.ca. [web service]

Carleton University, Ottawa, ON

Fall, 2024

- Built a bookstore website using a tech-stack including Spring Boot, JDBC, H2, and Thyme leaf.
- Implemented the front end through RESTful operations with jQuery and AJAX for single page application functionality.
- Deployed application through Azure and Google Cloud Platform following agile practices to ensure Continuous delivery.
- Followed Agile methodologies and managed project tasks using Kanban and Continuous Integration (CI) to deliver product in under 1 month.

Lead Software Engineer and Database Designer|| Active Edge [desktop application]

Carleton University, Ottawa, ON

Spring, 2024

- Led a team of 4 people to create a health and fitness desktop application in under 2 months.
- Designed and implemented JavaFX as the frontend, Java as the backend and PostgreSQL as the database to interface with the application.
- Employed query optimizations on database interactions, resulting in a 30% reduction in API response times.
- Created the underlying models and structured the database using ER diagrams resulting in clean architecture.

Lead Software Engineer || Uno-Flip-Game [desktop application]

Carleton University, Ottawa, ON

Fall, 2023

- Applied MVC-pattern to create a Java-based implementation of the game Uno-Flip resulting in modular and maintainable codebase.
- Constructed a comprehensive UML diagram to layout the structure of the codebase, minimizing project complexity and increasing maintainability.
- Leveraged data structures to integrate complex aspects of the game, reducing time complexity, and performance overhead.