Karthika Anu Surek Shah

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Education

York University Toronto, ON

Bachelor of Science in Computer Science (Honours) *Expected June 2028*

Relevant Coursework:

- Advanced Object-Oriented Programming
- Fundamentals of Data Structures
- Discrete Mathematics for Computer Science
- Introduction to the Theory of Computation
- Software Tools

Technical Skills

Languages: Java, Python, C, Bash, JavaScript, SQL (Postgres, SQLite), HTML, CSS
Frameworks: Spring Boot, FastAPI, Node.js, React, Tailwind CSS, JUnit
Developer Tools: Linux, Git, Docker, GitHub Actions, Maven, Postman, VS Code, IntelliJ, Eclipse, JupyterLab
Architecture and Design: Object-Oriented Design (OOD), Layered Architecture

Projects

Library Management | *Java, Spring Boot, PostgreSQL, Spring Security, JWT, JPA, Postman* May 2026

- Developed a layered Spring Boot REST API for a library management system, showcasing a layered architecture for maintainability and scalability.
- Modeled relational data structures (one-to-many, many-to-many) using PostgreSQL with JPA/Hibernate mapping, ensuring constraints, data integrity and consistency.
- Implemented JWT-based authentication and authorization with Spring Security, securing API endpoints with role-based access control (RBAC) and stateless session handling.
- Verified API behavior including request/response validation, status codes, and error handling using Postman.

FOM Museum Tracker | *FastAPI, Python, SQLModel, SQLite, React* March 2026

- Built a full-stack web application using Python, FastAPI, React, and SQLite to track in-game museum collectibles for Fields of Mistria.
- Created automated web scrapers for both text and images, RESTful API endpoints, JSON data pipelines, and database population scripts to manage and visualize collectible progress data.
- Developed a React/Vite frontend that consumes FastAPI REST endpoints to render nested data with real-time progress updates.

Experience

Co-op Student, Business Technology Support Finance - Metrolinx September 2026 - Present

- Assisted in designing the ticket system used by the Finance division. Collaborated with developers and other stakeholders to test and improve current processes, ensuring the system is reliable before production.
- Created Power BI dashboards for various workflows and processes in the Finance department, ensuring the data is easy to read for stakeholders.
- Test and improve workflows for Oracle EBS, ensuring the processes within the Finance division are safe and reliable.