Yaseen Sadat

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Education

University of Toronto   Expected May 2027
Bachelor of Science in Computer Science   *Toronto*, ON
- **Relevant Coursework:** Data Structures and Algorithms, Object Oriented Programming, Theory of Computation, Systems Programming, Linear Algebra w/Computational Applications, and Data Abstraction

Experience

Lumenera | 🌐 **lumenera.onrender.com**   Fall 2024
Founder & Developer
- Built a robust, scalable **trading card platform** (**MERN stack**) featuring a visually immersive interface, and enabling advanced product browsing with filtering, sorting, and cart management.
- Engineered a secure **JWT**-based authentication system with time-bound password resets (using **bcrypt** encryption), integrated **Stripe** for checkout, and designed **RESTful** APIs with full **CRUD** capabilities to manage user sessions, payments, and profile updates—ensuring a seamless, protected user experience.
- Containerized application services using **Docker Compose** for efficient local development and consistent production environments; established a robust **CI/CD pipeline** with **Jenkins** to orchestrate builds, run **automated integration tests**, and deploy seamlessly to **Render**.
- Developed a **admin platform** for streamlined management of products, orders, and platform settings, leveraging a **horizontally scalable architecture** to ensure consistent performance and reliability under growing user demand.
- Orchestrated a **scalable data architecture** using **MongoDB's** flexible schema design and **advanced indexing** for efficient, horizontally scalable operations. Integrated **Jest**-based integration testing to ensure robust code quality, and optimized read/write performance—**reducing load times by 35%**.

Projects

StockFlow | 🜨 github.com/StockFlow | *Java, Firebase, REST APIs*
- Developed an **educational stock trading platform** using **Java Swing**, designed to simulate real-world trading environments and help users explore market trends, execute simulated trades, and gain financial literacy.
- Integrated an **AI-powered chatbot** using OpenAI APIs to provide personalized financial guidance, implementing a **full pipeline** emphasizing prompt handling and front-end integration for a seamless user experience. Boosting user engagement through targeted educational insights and interactive finance tips.
- Developed robust **REST APIs** to deliver **real-time market data**, enabling users to explore diverse stocks, analyze historical trends, and execute simulated trades with precision.
- Engineered a secure **Firebase** authentication system for robust user identity management, leveraging **Firestore's NoSQL database** to store credentials safely and accelerate data access by **25%**. Integrated a **portfolio** feature supporting buy/sell operations, transparent transaction histories, and customizable analytics.

GenieAI | 🜨 github.com/GenieAI | *React, Node.js, JavaScript, HTML, CSS*
- Developed a **generative AI application** for real-time, persona-driven QA sessions—leveraging **React** and **React Native Web** as the primary frameworks to deliver a seamless, cross-platform user experience.
- Employed OpenAI APIs with advanced **prompt-engineering techniques** to generate context-aware, "genie-like" responses and maintain consistent conversational flow.
- Implemented a **clean, responsive interface** using **Node.js**, featuring dynamic typing animations, interactive sidebars, and real-time prompt histories—all ensuring smooth communication between the front-end and AI services.

Forest of Echoes | 🜨 github.com/Forest-of-Echoes | *Python, Pygame*
- Built a **2D adventure game** in **Python** and **Pygame**, featuring branching storylines, puzzle-solving, and resource management for a suspenseful escape experience.
- Implemented grid-based maps, dynamic inventory, and multi-level difficulty using **OOP principles** for scalable code. Enhanced gameplay with AI-generated assets, immersive sound design, and atmospheric effects.

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, R
Frameworks: React, Node.js, Express.js, Tailwind CSS, Jest, Pytest, Pygame, Pandas
Tools: Git, GitHub, Docker, MongoDB, Jenkins, Postman, Firebase, Cloudinary, Maven, VS Code, AWS, JWT, Babel
Concepts: Databases, Encryption & Decryption, Artificial Intelligence, REST APIs, Cloud Computing, Automated Testing