Yaseen Sadat

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Education

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

Experience

Lumenera | lumenera.onrender.com   *Summer 2024*
Founder & Developer
- Built a trading card platform (**MERN stack**) from scratch with a visually immersive interface, enabling product browsing with advanced filtering, sorting, and cart management, significantly enhancing overall user experience.
- **Containerized** services using **Docker Compose** for efficient local development and consistent production environments, established a robust **CI/CD pipeline** with **Jenkins** for orchestrating builds and running **automated unit and integration tests**.
- Spearheaded a robust **Jira** integration within the backend, **automating ticket creation** for critical errors and significantly **streamlining bug tracking**, reducing manual overhead, and **accelerating resolution times by 25%**
- Integrated **MongoDB** with sharding and replication for scalable data management, leveraged **Jest** for **unit testing**, enforced rigorous **linting** and **E2E** coverage, monitored performance with profiling tools, and optimized build pipelines to **reduce load times by 35%**
- Designed secure **JWT-based authentication** by implementing **time-bound password resets** using **bcrypt** encryption and integrated **Stripe** for reliable checkout, exposing **RESTful endpoints** to manage user sessions, payments, and profile updates, ensuring a seamless and protected user experience
- Engineered a dedicated admin panel for streamlined management of products, orders, and platform settings, adopting a **scalable architecture** that supports horizontal growth and ensures consistent performance under increasing user traffic

Projects

StockFlow | ⓞ StockFlow | Java, Firebase, REST APIs
- Developed an **educational stock trading platform** guided by **clean architecture** principles, leveraging **REST APIs** for **real-time market data**, enabling users to explore stocks, view historical trends, and engage in simulated trades
- Integrated an **AI-driven chatbot** for personalized financial guidance, delivering intuitive, on-demand insights and improving user engagement with educational finance-related tips
- Implemented a **secure Firebase authentication** system, integrating **Firestore's NoSQL database** for efficient credential storage and a **Java Swing** front end to enhance user interaction, **accelerating data access by 25%**
- Designed an **interactive portfolio** management feature for users to buy, sell, and track stock performance, complemented by transparent transaction histories and **customizable data visualization tools**

InventoryHub | 🌐 InventoryHub | C, Python, Flask, Bootstrap, Docker
- Developed a **full-stack inventory management web app** (**Flask/Bootstrap**) featuring complete **CRUD functionality** for items with permission-based access, leveraging **SQLite** persistence and **Docker** containerization. Integrated custom **C**-based **hash maps** and **B-trees** (via **Python's ctypes**) to optimize **memory allocation** and **enhance performance by 45%**.
- Demonstrated **advanced algorithmic design** with $O(1)$ in-memory lookups and $O(\log n)$ **sorted queries**, leveraging **specialized memory management strategies** and **custom data structures** for real-time inventory updates under concurrent usage.

GenieAI | ⓞ GenieAI | React, Node.js, JavaScript, HTML, CSS
- Developed a **generative AI application** powered by **OpenAI**, employing **prompt-engineering** methods to deliver context-aware "genie-like" responses. Built UI in **React** and **React Native Web**, embedding several dynamic features, elevating user experience
- Engineered a robust **Node.js** backend for **real-time data handling** and seamless communication between front-end and AI services, ensuring efficient, scalable performance and a standout user experience

Technical Skills

Languages: Python, Java, JavaScript, C++, C, C#, TypeScript, HTML, CSS, R, SQL
Frameworks: React, Node.js, Express.js, Django, Flask, React Native, JUnit, NUnit, Tailwind CSS, Bootstrap, Vue.js, Jest
Tools: Git, GitHub, Docker, Jira, MongoDB, Jenkins, Kubernetes, Postman, Firebase, Maven, VS Code, AWS, JWT
Concepts: Databases, Automated Testing, REST APIs, DevOps, Artificial Intelligence, Cloud Computing, Agile Practices