

MD. ISMAIL HOSEN

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PROFESSIONAL SUMMARY

Backend-focused developer with strong hands-on experience in **Spring Boot**, **Node.js**, **Express.js**, and **SQL/NoSQL databases**, and familiar with **React.js** for full-stack integration. Skilled in building **scalable**, **secure applications featuring clean business logic, optimized APIs, and role-based workflows**. Demonstrates strong problem-solving ability backed by solid CS fundamentals, OS and concurrency concepts, and published research experience. Passionate about writing maintainable, **high-quality code and contributing to impactful, real-world products**.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript, SQL

Frameworks & Technologies: Spring Boot, Express.js, React

Databases: PostgreSQL, MySQL, MongoDB

Tools and other : Git, System Design, OOP, Data structure and algorithms, MS office Suite

PROJECTS

ArtBuy ↗ | React, Express.js, and MongoDB, JWT

January 2025

- ArtBuy connects artists and buyers. **Artists** manage *listings* and *orders*, while **buyers** can *purchase* and *track history*. Authentication secures all actions. Business logic enforces **ownership**, **stock availability**, and structured *order status transitions*. The platform is **scalable**, supporting media and profiles for future enhancements like payment integration.

Bookkit ↗ | Spring Boot, PostgreSQL, and Postman

April 2024

- Bookit manages **users**, **apartments**, and **flats**, utilizing precise business logic to enforce **data integrity**, **ownership**, and **referential rules**. Its architecture is layered, featuring DTO-based **APIs** and centralized error handling. This design ensures the real-estate solution is **reliable**, **maintainable**, and **highly scalable**.

AggriCo ↗ | React, Express.js, and mysql

April 2024

- The core **business logic** enforces precise **product ownership** by linking the owner's **number** to the product record, enabling per-user listing and management. The system's **request flow** relies on the user's **role** to dynamically select the correct **database table** for querying and storing user records and uses the user's **number** to select or link all associated resources. **Data integrity** is ensured by structured product records and user profiles.

OS Concurrency and Deadlock Resolution ↗ | C and Java

March 2025

- Devised solutions for fundamental OS principles, such as **Multithreading**, **CPU Scheduling methods** (like **FCFS**, **SJF**, **Round Robin**), and **Synchronization techniques**.
- Tackled and offered remedies for usual concurrency issues like **Deadlock** and **Starvation**.

PUBLICATION

Supply Chain Management System Tailored for Agribusinesses ↗

March 2025

- The core **business logic** for the Agribusiness Supply Chain Management System is designed to **empower farmers** by facilitating direct sales, thus **eliminating middlemen** and promoting **equitable pay**. Key **data integrity** rules enforce entity relationships, such as a **Vendor** placing **many Orders**, a Lot belonging to only one **Warehouse**, and Products having only one Product Type. Farmers must access **Order Management** to view and fulfill incoming orders.

EDUCATION

Independent University, Bangladesh(IUB)

Present

B.Sc. in Computer Science

Dhaka, Bangladesh

CERTIFICATIONS

- CS50 - Cambridge & Massachusetts
- CCNAv7: Introduction to Networks - Cisco
- Problem Solving (Intermediate) - HackerRank
- SQL (Intermediate) - HackerRank
- Introduction to Prompt Engineering - Simplilearn
- Career Essentials in Generative AI - Microsoft and LinkedIn