

Sagar Hasan

Software Engineer – Backend & Distributed Systems

BSc in Computer Science & Engineering, 2024

Aspiring Software Engineer with a strong foundation in system design, backend development, and problem solving. Proficient in Python, C++, and JavaScript, with hands-on experience in Node.js, MongoDB, and RESTful APIs. Passionate about building scalable, distributed systems and eager to contribute to cloud platforms like Microsoft Azure.

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PROFESIONAL EXPERIENCE

Software Developer – Lyxa S.A.L (formerly KadriTech AB)

06/2023 – Present | Gulshan Niketon, Dhaka, Bangladesh

- Designed and deployed a rider assignment system using graph algorithms to optimize real-time delivery routes—improving logistical efficiency and response time.
- Developed and maintained scalable backend services using **Node.js** and **MongoDB**, integrating **RESTful APIs** with front-end systems.
- Implemented data caching and optimized database access patterns, significantly reducing response times and bandwidth usage across services.
- Contributed to modular, maintainable front-end applications using React, while ensuring strong alignment with backend logic and performance goals.
- Collaborated closely with product, design, and QA teams in Agile sprints to ensure high-quality feature delivery and rapid iteration.

Junior Software Developer – KadriTech AB

02/2024 – 08/2024 | Gulshan Niketon, Dhaka, Bangladesh

- Enhanced API performance through efficient memory management and CPU optimization across critical services—contributing to infrastructure cost reduction.
- Supported the development and maintenance of Lyxa's e-commerce platform, with a focus on system scalability and resilience.
- Participated in debugging production issues, performing root cause analysis and deploying stable patches with minimal downtime.
- Gained hands-on experience in system design, team code reviews, and CI/CD workflows in a distributed team environment.

RELEVANT COURSES

Data Structures & Algorithms OOP

System Design Computer Networking

Non-blocking I/O | Event-Driven Architecture.

Efficient Skill on Memory Management

EDUCATION

Bachelor of Science: Computer Science and Engineering

Daffodil International University - Daffodil Smart City (DSC),

Dirulia, Savar, Dhaka 2020-01 - 2024-02

TECHNICAL SKILLS

Languages & Backend Technologies:

- Python, C++, JavaScript (Node.js)
- REST APIs, Express.js, TypeScript
- SQL, NoSQL (MongoDB, PostgreSQL)

Cloud & DevOps:

- Microsoft Azure (Storage, VMs – basic knowledge)
- Docker (Containers), GitHub Actions (CI/CD)
- Azure Blob Storage (basic understanding)

System Design & Distributed Systems:

- Load balancing, microservices, high availability
- Event-driven architecture, message queues (e.g., RabbitMQ)
- Caching (Redis)

Frontend (Basic Understanding):

- HTML5, CSS3, React.js

Version Control & Collaboration:

- Git, GitHub, Jira, Agile methodology

Other:

- Debugging, Optimization, Secure coding practices
- Competitive programming Codeforces & Leetcode 1200+ 🏆
- Project Euler & Others 500+

SELECTED PROJECTS

Lyxa Console - Unique E-commerce Site, 🏆

02/2024 – present

- Implemented backend logic for order management, real-time delivery assignment using graph algorithms (shortest path to assign riders).
- Developed APIs for admin panel and integrated authentication.
- Improved system performance with load optimization and query tuning.

System Design – Talk2Active (IELTS Platform)

- Designed scalable backend using Node.js & MongoDB.
- Built modular components for user progress tracking and scheduling.
- Integrated secure login (JWT) and real-time messaging features.

Data Structures NPM Library (ds-saga-kit) 🏆

- Created reusable and optimized implementations for data structures and algorithms in JavaScript.
- Published and maintained on npm.

Algorithms Visualizer 🏆

- Built a unique data structure and algorithm visualizer (e.g., Divide & Conquer, Queues, Stacks) in React.
- Aimed to improve learning and teaching through interactive UI.