

Manas Saha Roy

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Results-driven individual with a strong focus on building scalable, high-performance systems and solving complex technical challenges. Committed to continuous learning, driving architectural excellence, and delivering impactful solutions in dynamic environments where innovation and technical leadership are valued.

WORK EXPERIENCE:

Senior Software Engineer, *Tech Analytica Limited*

06/2022 – Present

- Architected and maintained scalable, high-throughput backend services and contributed to frontend integration.
- Designed and optimized RESTful APIs with a focus on performance, security, and fault tolerance.
- Engineered data models and managed SQL/NoSQL databases, improving query efficiency and system scalability.
- Implemented containerized environments using Docker and Docker Compose for consistent, portable deployments.
- Built and maintained CI/CD pipelines with GitHub Actions, enabling automated testing, build, and zero-downtime deployments.
- Managed infrastructure on VMs and servers, ensuring high availability, load handling, and system reliability.
- Collaborated across teams to drive system design, API contracts, and end-to-end architecture decisions.
- Enforced code quality through code reviews, modular design, and adherence to best practices.
- Continuously optimized system performance, observability, and developer workflows.

Data Analyst, *Quantanite BPO*

01/2021 – 02/2022

- Sorting and controlling daily targeted data flow.
- Gathering and moderation of confidential and nonconfidential data

KEY PROJECTS

AmbuFast 🚑, *An ambulance ride sharing service in Bangladesh*

Led the end-to-end architecture and development of Ambufast, delivering a scalable microservices-based system with efficient caching, asynchronous job processing, and event-driven communication. Built robust realtime capabilities for live tracking and dispatch coordination, while ensuring high availability through automated deployment pipelines, centralized monitoring, and reliable backup and rollback strategies. Drove full-stack development, creating a performant and responsive user interface with modern component-driven architecture, and ensured seamless integration across all system components.

Appeler *🔗* , *SDK based audio & video conferencing solution*

Engineered a real-time, multiplatform video calling platform, enabling low-latency communication through WebRTC and event-driven socket architecture. Built a scalable real-time data layer as an alternative to managed services, and designed a distributed queuing system to handle session lifecycle management and automated cleanup. Strengthened network performance and security through optimized DNS configuration and secure relay infrastructure. Streamlined deployment with containerized environments and established a comprehensive observability stack with metrics, logging, and monitoring for system reliability and performance insights.

DGprint24 *🔗* , *Digital Printing Service Platform*

Architected the core system for a digital printing platform, designing a flexible and scalable data model to handle complex product customization workflows. Engineered a recursive pattern-based solution enabling dynamic combination generation within a single unified model, significantly simplifying product configuration logic while maintaining extensibility and performance.

SKILLS AND PROFICIENCY:

Programming language: JavaScript, Python, Go, C++, PHP •

Frontend frameworks and libraries: React js, Next js •

Backend frameworks and libraries: Node.js, Nest.js, Express.js, Django, Django Rest API •

Database: MySQL, MongoDB, PostgreSQL, Supabase, Firebase, Redis •

Cross-platform: React Native • **DevOps:** Docker, NGINX, Github actions CI/CD pipeline •

Payment gateways: SSLCommerz, Bkash, City bank, Stripe

EDUCATIONAL BACKGROUND:

Bachelor of science in Electronics & Electrical Engineering (EEE), <i>American International University Bangladesh (AIUB)</i> 3.45 (on a scale of 4.00)	01/2016 – 01/2020
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Higher Secondary Certificate (H.S.C), <i>Shaheed Police Smrity School & College</i> 5.00 (on a scale of 5.00)	07/2013 – 08/2015
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Secondary School Certificate (S.S.C), <i>Bangladesh Navy School & College</i> 4.88 (on a scale of 5.00)	01/2011 – 05/2013
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DECLARATION:

I, Manas, hereby declare that the information provided is accurate and complete to the best of my knowledge and belief. I acknowledge that any misrepresentation or omission may result in disqualification or termination of employment.