Mahmudul Alam

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Skills

Languages: C/C++, Kotlin, Python, Rust, JavaScript, TypeScript, SQL

Technologies & Tools: AWS, EC2, Compute Engine, S3, Google Cloud Storage, Docker, Django, Actix, Next.js, React.js

Work Experience

EJP, Rangpur   Oct 2024 - Present

Full Stack Developer

- Refine application efficiency by 30% through Rust-based code and React.js, delivering a smooth user experience.
- Enhance backend and PostgreSQL database performance to operate on 1 vCPU and 1GB RAM, utilizing Rust's efficiency and React.js client-side rendering.
- Reduce network costs by 40% and decrease server load by 25% by migrating static files to Google Cloud Storage.
- Integrate AI-driven technologies to structure and organize data, resulting in a 30% improvement in storage optimization, a 40% increase in retrieval speed, and a 90% diminution in manual effort.
- Ubuntu, Compute Engine, Google Cloud Storage, Nginx, Rust (Actix), Diesel, PostgreSQL, TypeScript, React.js.

Begum Rokeya University, Rangpur   Aug 2024 - Oct 2024 (Contract)

Backend Developer

- Streamlined office operations for 1000+ users by developing a scalable file-tracking system with Next.js, TypeScript, MySQL, and Prisma ORM.
- Enhanced file security with passwordless authentication, enabling 50% faster file access using QR and barcode technology.
- Engineered a timeline visualization tool with interactive graphs to monitor file movements, resulting in a 25% enhancement in process monitoring efficiency. Integrated real-time email notifications, cutting response times by 30%.
- Optimized database querying and management, attaining a 40% reduction in query execution time and a 25% improvement in overall system performance, facilitating seamless and efficient workflows.
- JavaScript, TypeScript, NextJS, MySQL, Prisma.

Time Smart Professionals, Rangpur   Jul 2023 - Dec 2023

Android and Web Developer

- Cut hosting costs by 400% and boosted platform capacity by 10x, supporting 10,000+ simultaneous users with enhanced infrastructure.
- Built a web application using Django and React.js, ensuring 99.9% uptime, robust functionality, and a seamless user experience, driving a 30% increase in user engagement.
- Deployed the website on a dedicated server, managing end-to-end server operations, including OS setup, security configurations, and SSL certificate installation, securing 99.9% uptime reliability.
- Migrated three payment systems (Bkash, Nagad, Rocket) to Python, facilitating a 25% faster transaction processing time.
- Created a secure Android application to safeguard study materials, leveraging RSA and AES encryption algorithms, minimizing data vulnerability by 50%.
- Debian, Compute Engine, Google Cloud Storage, Nginx, Python, TypeScript, Kotlin, PostgreSQL, Django, React.js, Redux.

Education

Begum Rokeya University, Rangpur   Jan 2020 - Jan 2025

B.Sc. in Computer Science and Engineering   *CGPA: 3.33/4*

Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Advanced Data Structures and Algorithms, Information Retrieval, Image Processing.

Project Work

- **Meeting Helper (2021):** Developed Meeting Helper, a browser extension designed to track attendance and activity during online meetings for virtual classes. The tool simplified identifying attendance patterns and user engagement. JavaScript, Web Scraping.
- **B12J Online Judge (2021):** Developed B12J Online Judge, a platform for creating custom problems and contests, evaluating solutions, and providing tutorials. Integrated WebSocket for real-time content updates and Redux for efficient data caching, enhancing performance and curtailing traffic usage. Designed to streamline problem management and deliver a seamless user experience for competitive programming. Python, Django, JavaScript, Redux, React.
- **Issue Tracker (2022):** Built an Issue Tracker to manage tasks with features for adding, editing, deleting, and assigning issues, supported by robust authorization checks. Utilized React Query, Zod, and Zustand for enhanced responsiveness. Implemented secure user and data management using Auth.js and Prisma, enhancing efficiency and scalability for issue tracking. NextJS, JavaScript, TypeScript, MongoDB, Zustand.

Awards and Certificates

- **Divisional Champion:** Became divisional champion at ICPC Asia Dhaka Regional Contest in 2022 and 2024.
- Achieved a competitive rating of 1691 on Codeforces by solving complex algorithmic challenges, showcasing the ability to tackle intricate coding problems and enhance programming proficiency in high-pressure environments.
- Obtained Python, Django, React, and NextJS course certificates from Code With Mosh.
- Completed Cross Platform App Development using Flutter trained by ICT Division Bangladesh.