Jagonmoy Dey

⚲ Dhaka, Bangladesh   ✉ jagonmoydey1997@gmail.com   📞 (+880) 193 288 07 27   🔗 jagonmoy.github.io

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Education

BSc in Software Engineering   *Sylhet, Bangladesh*
Shahjalal University of Science and Technology   *Jan 2018 – Feb 2023*
CGPA: 3.6 / 4.0 (10th position)

- Achieved a 3.85 average GPA over the last four semesters, with a perfect 4.0 (1st place) in the 7th semester and 3.97 (2nd place) in the 8th.
- Courses: Software Requirement Engineering, Software Architecture and Design Patterns, Software Verification and Validation, Data structures & Algorithms, DBMS, Operating Systems, Computer Networking, Linear and Abstract Algebra, Data Science, ML, AI etc.

Research Experience

Thesis: Speaker Diarization with Speech Recognition in Bengali   *Sylhet, Bangladesh*
Shahjalal University of Science and Technology   *Sep 2022 – Feb 2023*

- Addressed the problem of multi-speaker transcription in Bangla by developing a system that combines speaker diarization ("who spoke when") and speech recognition ("what was said") to generate structured, dialogue-style transcripts.
- Designed a full pipeline using Bi-LSTM for speaker diarization and Google Cloud Speech-to-Text for transcription, incorporating voice activity detection, speaker segmentation, and clustering.
- Integrated the WebRTC VAD library for detecting speech regions, developed custom code snippets to link VAD with segmentation, and used pyannote-audio embeddings for speaker representation.
- Collected and annotated 8 hours of Bangla audio data from YouTube debates and talk shows using ELAN, Audacity, and y2Mate.

Work Experience

Software Engineer   *Dhaka, Bangladesh*
Cefalo Bangladesh Limited   *July 2024 – Present*

- Worked from scratch in an Oslo-based startup environment as a full-stack engineer to build and scale **Subrite**, a multi-tenant SaaS subscription management platform also contributing to the development of tenant projects, actively following Agile methodologies and the full software development life cycle (SDLC).
- Architected email automation functions using Nest.js event queue system to handle both scheduled and event-driven tasks, serving around 300,000 users across Scandinavia.
- Optimized web performance by implementing efficient data fetching and caching strategies incorporating Next.Js and Redis, improving overall page load performance from 55% to 95% and SEO from 85% to 100% (Google Lighthouse metrics).
- Designed responsive email templates using MJML; implemented rich text rendering to generate parsable HTML and PDF content; developed on-the-fly PDF generation and optimized media delivery with MUX for video, and Imgix, Next/Image for efficient image rendering.
- Worked extensively with the Sanity CMS alongside traditional SQL databases—implemented automated type generation, wrote efficient GROQ queries, and handled diverse content types (icons, rich text, media) to dynamically render them on the frontend.

Associate Software Engineer   *Dhaka, Bangladesh*
Cefalo Bangladesh Limited   *Feb 2023 – June 2024*

- Integrated an external tenant application with Subrite's OIDC system using NextAuth, handling secure authentication flows including dynamic redirect and callback URLs to support tenant-specific login and post-login redirection.

- Introduced and configured Playwright for end-to-end testing across the system, integrating it into the CI/CD pipeline for automated testing and quality assurance, and wrote unit tests using Jest to ensure code reliability and functionality.
- Implemented custom fields integration for a multi-tenant front-end, allowing tenant-specific configurations to be applied dynamically, built responsive UIs, and developed well-maintained, reusable components.
- Optimized backend RESTful API performance and fine-tuned TypeORM SQL queries, resulting in a 1.5x improvement in API response times and overall system efficiency.

Teaching and Monitoring Experience

Trainer for Junior Software Engineers and Interns   *Dhaka, Bangladesh*
Cefalo Bangladesh Limited   *Sep 2023 – Present*
- Trained junior engineers on the complete software development process, conducted technical workshops, reviewed code, and planned training programs.

Competitive Programming Workshop Instructor   Sylhet, Bangladesh
Shahjalal University of Science and Technology   *Jan 2021 – Aug 2021*
- Conducted university workshops on competitive programming, teaching concepts related to various data structures and algorithms to improve problem-solving skills.

Projects

SlackBook | *Javascript, Node.Js, Slack API, Facebook Graph API*
- Developed a Slackbot, integrating Slack API and Facebook Graph API to automate message/attachment sharing between Slack and Facebook by various commmands.

Number Theory and **Graph Theory** | *C, C++*
- Created and maintained two GitHub repositories on Number Theory and Graph Theory, featuring tutorials, problems, and solutions for learning DSA. Each repository has received 20+ stars and is now used in the department to construct Competitive Programming and DSA courses.

Competitive Programming

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- Solved more than 1200 problems in different online judges, participated in 80+ online and offline contests, and achieved a max rating of 1500+ in codeforces.

Technical Skills

Languages: JavaScript/TypeScript, SQL, HTML/CSS, C/C++, Python

Frameworks/Libraries: React.Js, Next.Js, Nest.Js, Express.Js, Tailwind CSS, Playwright, Jest, PostgreSQL, Sanity, Redis, MUX, MJML, Imgix

Developer Tools: Git, Docker, Swagger, Postman, Google Colab, Jupyter Notebook

Machine Learning Technologies: NumPy, Pandas, TensorFlow, Scikit-learn

Volunteer Experience

Programming Contest Coordinator at SUST SWE TECHNOVENT 2023
- Worked as a Programming Contest Coordinator, overseeing the setup and management of the contest infrastructure for participants from 100+ universities nationwide, and led a team of juniors in executing the event.

Reference

Ashif Mohammad Iqbal
Engineering Manager, Cefalo
Email: ashif@cefalo.com
LinkedIn: */ashif-mohammad-iqbal*