Shudipta Majumder

Software Engineer

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Education

Daffodil International University(DIU) — Dhaka, Bangladesh
- Bachelor of Science in Computer Science & Engineering — *2018-2022*
- **CGPA: 3.23 /4.00**
- **KeyCourses:** DataStructures & Algorithms, Object Oriented Programming, Database, Operating Systems, AI, Software Engineering

Skills

Languages	Frontend	Backend		Machine Learning (AI)	Server	Problem Solving	Soft Skills
Python	React	Django	Web Socket	NLP	Nginx	Solved 200+ Problems	Presentation
JavaScript	Next JS	Node.js	Express.js	RNN	AWS	URI (x200)	Project Management
C++	Next Auth	MongoDB	GraphQL	LSTM	CI/CD	LeetCode (x9)	Attention to Detail
Java	Type Script	GRPC	Nginx	CNN	Docker		Technical Writing
Bash	GSAP	PostgreSQL	RabbitMQ	Tensorflow			Time Management
Golang	Redux	System Design	Redis	Transformer			

Professional Experiences

WALTON Group, Bashundhara R/A, Dhaka, Bangladesh — **Dec 2022 - Present (2.6+ Years)**

Software Engineer (Full-Stack, Backend Focused) — *Sep 2023 - Present*

- Developed Django REST APIs for a School Management System, improving backend performance and scalability.
- Implemented Redis for caching and message queuing, enhancing email and SMS sending efficiency.
- Integrated WebSocket using Django Channels to enable real-time communication in the system.
- Designed and optimized database queries to ensure fast and efficient data retrieval.
- Created asynchronous task processing using Celery for handling background tasks efficiently.
- Implemented real-time notifications for important events such as attendance updates and announcements.
- Ensured API security and performance optimization using Django middleware and DRF best practices.
- Developed logging and monitoring solutions to track system performance and debug efficiently.
- Enhanced WebSocket performance for seamless real-time updates across multiple user interfaces.
- Configured Nginx for media file serving, ensuring efficient delivery of static and media content.
- Set up Nginx as a reverse proxy to optimize load balancing and improve application performance.
- Learning AWS cloud services to build scalable and secure infrastructure solutions.
- Applying skills in EC2, S3, Lambda, and IAM to deploy real-world cloud applications.

Associate Software Engineer (Full-time) — *Mar 2023 - Aug 2023*

- Designed and implemented component-based architecture for a School Management System using modern frontend frameworks.
- Developed a responsive menu, top bar, and sidebar with an intuitive UI/UX for seamless navigation.
- Integrated RESTful APIs for real-time data retrieval and dynamic content updates.
- Built numerous reusable components and utility functions, improving development efficiency and maintainability.
- Implemented dark mode, light mode and system mode functionality for enhanced user experience and accessibility.
- Optimized frontend performance and responsiveness to ensure smooth functionality across devices.
- Ensured cross-browser compatibility and adherence to UI/UX best practices.
- Collaborated with backend developers to refine data structures, authentication, role-based access and user-based access.
- Contributed to key school management features, including student records, attendance tracking, payroll and staff management.
- Designed and implemented APIs for corporate price quotations, ensuring accurate and dynamic pricing management.
- Contributed to design and functionality improvements for Walton BD, enhancing user experience and system efficiency.
- Learn and apply backend journey starting from this time, also handle relational and non relational database.

Software Engineer Intern — *Dec 2022 - Feb 2023*

- Collaborated with PM, UI-UX Team to contribute codes in a Walton Digitech Website with React and Next JS.
- Learned about project development lifecycle, development best practices & some Design for GSAP.
- Designed a multi-module school management system draft prototype consisting of several important features.

Thesis

A Predictive Model To Detect Online Cyber Bullying By Using Machine Learning.

The ultimate goal is to create a tool that can assist social media companies, online communities, and educators in identifying and preventing harmful online behavior, fostering a safer and more positive digital environment. The model leverages natural language processing (NLP) techniques to analyze text data and detect abusive or threatening language patterns. By training on labeled datasets of online interactions, it can classify and flag potential cases of cyberbullying in real time.

Personal Projects

Real Time Messaging system

This project creates a real-time messaging application using Node.js, raw WebSockets, and React. Node.js handles the backend WebSocket server to manage message exchanges between clients, while React provides the frontend for user interaction. The WebSocket connection ensures instant, bidirectional communication for a seamless chat experience.

Detect and Recognition object Real Time by using Machine Learning

This research project utilizes machine learning to automatically detect and recognize objects in real-time through CCTV and any camera feed. It applies deep learning techniques to analyze video streams, identify objects, and enhance security and automation. The system aims to improve surveillance, traffic monitoring, and smart city applications.

Creating City Scenario by using Computer Graphics.

This project creates a dynamic 2D animated city scenario with three different modes, simulating various environmental and traffic conditions. Using computer graphics, it generates a visually engaging urban simulation. The system can be used for research, gaming, or educational purposes.

Restaurant Management System

A digital platform for restaurant owners to manage food orders and update menu items through an admin panel. Customers can place orders online, track their status, and receive real-time updates. The system improves efficiency and enhances the overall dining experience.

Emotion Based Songs Recommendation – Natural Language Processing

This project leverages Natural Language Processing (NLP) to analyze user emotions and recommend songs accordingly. By detecting mood from text inputs or facial expressions, the system curates personalized music playlists. It enhances user experience by offering emotionally relevant music suggestions.

References

Md. Galib Ibn-Kibria

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