Shudipta Majumder

Software Engineer

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Education

Daffodil International University(DIU)   *Dhaka, Bangladesh*
2018-2022
- Bachelor of Science in Computer Science & Engineering
- **CGPA: 3.21 /4.00**
- **Key Courses:** DataStructures & Algorithms, Object Oriented Programming, Database, Operating Systems, ML, Software Engineering

Skills

Languages	Frontend		Machine Learning (AI)	Server	Problem Solving	Soft Skills
Python	React	Django / FastAPI	NLP	Nginx	Solved 200+ Problems	Presentation
JavaScript	Next JS	Node.js / Express.js	RNN	AWS	URI (x200)	Project Management
C++	Next Auth	PostgreSQL / MongoDB	LSTM	CI/CD	LeetCode (x116)	Attention to Detail
Golang	Type Script	GRPC / Web Socket	CNN	Docker		Technical Writing
Bash	GSAP	RabbitMQ / GraphQL	Tensorflow			Time Management
	Redux	System Design / Redis	Transformer			

Professional Experiences

WALTON Group, Bashundhara R/A, Dhaka, Bangladesh   **Dec 2022 - Present (2.8+ Years)**

Software Engineer (Full-Stack, Backend Focused)   *Sep 2023 - Present*
- Developed Django REST APIs for a School Management System, improving backend performance and scalability, also Implemented Redis for caching and message queuing, send email and SMS sending efficiency. Integrated WebSocket using Django Channels to enable real-time communication in the system.
- 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.
- Integrated **Natural Language Processing (NLP)** techniques to analyze and process unstructured text data such as student feedback, messages, and notices, improving insights and automated categorization.
- Developed **semantic search and question answering** functionality using NLP + embeddings for fast and context-aware information retrieval within the school management system.
- Optimized AI workloads by deploying models via **Olama locally** for cost-effective inference and experimenting with **fine-tuning LLMs** to align them with domain-specific school/education data.
- Implemented **chatbot/virtual assistant features** using **Olama (LLM inference engine)** for providing instant answers to FAQs, attendance queries, and academic support, reducing manual workload for staff.

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. Ensured cross-browser compatibility and adherence to UI/UX best practices.
- Implemented dark mode, light mode and system mode functionality for enhanced user experience and accessibility. 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.

Software Engineer Intern   *Dec 2022 - Feb 2023*
- Collaborated with PM, UI-UX Team to contribute codes in Digitech Website Next JS and Designed a multi-module school management system

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.

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,

Detect and Recognition object by using Machine Learning (CNN)
This research project utilizes machine learning to automatically detect and recognize objects in real-time through given user classes data.

References

Md. Galib Ibn-Kibria   *Email: ibn.kibria@oftmail.com*
Senior Additional Executive Director, ICT, Walton Hi-Tech Industries PLC.   *Phone: +8801678860539*

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Managing Director of Telephone Shilpa Sangstha Ltd. (TSS)