Nayeem Islam

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EXPERIENCE

Senior System Analyst | *Synesis IT PLC, Dhaka, Bangladesh*   Jun 2024 – Present

Big Meeting Solution

- Developed a full-stack web application that will be used to stream a virtual meeting to 5000+ people
- Led a technical team to build a chat system and a streaming platform around it to accommodate the user requirements
- Integrated this system seamlessly with *Convay*(a video conferencing solution) so users attending this system have an interactive experience

Voice Based Chatbot

- Led a technical team to build an ML/DL based voice and text chat bot that is capable of answering questions based on user query in *Bangla*, also can ask user relevant questions
- Fine tuned a *Bangla Wav2vec2* ASR model, also built a pipeline system to accommodate various *Bert* models and *Embedding* models
- Integrated this system with a *Asterisk* server so users can call and chat with this bot

System Analyst | *Synesis IT PLC, Dhaka, Bangladesh*   Apr 2022 – May 2024

Transcription System for Convay

- Implemented a multi lingual transcription system for *Convay*, which is capable of separating user voices from an online meeting to produce accurate transcriptions
- Fine tuned a *Whisper medium* ASR model to accommodate *Bangla*
- Analyzed several problematic use cases that occur only in an online meeting, implemented a system that is capable to tackle most of these issues
- Built a pipeline system based on *VAD*, *Denoisers* and *LUFS* that can provide error-free accurate transcription in both real-time and post-processing scenarios
- Also led a team to built a pipeline system based on *Whisper diarization* to identify and generate transcriptions from a recording of a meeting

Automatic Meeting Minutes Generation

- Led a team to build an automated meeting minutes solution based on several pre-defined templates
- Integrated popular state of the art *LLM* models to generate meeting minutes based on templates and user input, from *Convay* meeting transcription
- Integrated a *IndicTrans2* model to provide multi lingual meeting minutes as well

Analyst Programmer | *Synesis IT PLC, Dhaka, Bangladesh*   Nov 2020 – Apr 2022

Denoiser System for Convay

- Integrated an *RNN* denoiser model to *Convay*'s audio system, which utilizes a *WASM* module to provide a better audio experience even on smaller devices
- Also added an automated *VAD* service that will unmute a meeting user's microphone only when he is talking, resulting a better noise-free design

Senior Programmer | *Synesis IT PLC, Dhaka, Bangladesh*   Jun 2018 – Oct 2020

Ekpay - An Integrated Platform for Utility Bill Payment

- Designed and built a billing platform that is integrated with most of the utility billers of *Bangladesh*
- Developed a payment aggregator platform that integrates with numerous payment gateways of banks in *Bangladesh*, offering a seamless bill payment experience from a unified platform

Programmer | *Synesis IT PLC, Dhaka, Bangladesh* Jun 2016 – May 2018

Automation Systems for Organisations

- Designed and built automation platforms that digitalize related time consuming paper based processes, for *Bangladesh Standards and Testing Institution(BSTI)* and *Bangladesh Bureau of Statistics(BBS)*

EDUCATION

Bangladesh University of Engineerting and Technology Feb 2011 – Mar 2016

B.Sc. in Computer Science and Engineering *CGPA: 3.12/4.0*

SKILLS

Languages: Java, C#, Python, JavaScript/TypeScript, SQL

Frameworks: Spring Boot, ASP.NET, FastAPI, ReactJS, Angular

Concepts: System Design, Stateless, Caching, Authentication, JWT, OAuth2, Encryption, Load Balancing, Proxy, CDN, CI/CD, Design Patterns, Microservice, Distributed System, Pub Sub, Storage

Tools: Git, Docker, JUnit, Linux, Cursor, VS Code, IntelliJ IDEA, Azure Cloud Services, GraphQL, Oracle DB, MySQL, PostgreSQL, MongoDB, Liquibase, RabbitMQ, Apache Kafka, Redis, Eureka, Hystrix, Spring Cloud Gateway, Maven, Jenkins, Elasticsearch, Prometheus, Grafana, NPM, LaTeX

Libraries: WebRTC, JQuery, Pandas, NumPy, Matplotlib

ACHIEVEMENTS

- Received *Best Team Lead* Award on *Synesis IT PLC* Townhall Q3, 2024
- Completed 500+ problems on *Leetcode*