SHARIQ AFTAB

Kolkata, West Bengal

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Education

SRM Institute of Science and Technology   **August 2020 - June 2024**
B.Tech in Computer Science Engineering with Specialization in AI/ML (CGPA of 8.9)   *Delhi NCR, India*

Experience

OpenInApp   **December 2023 – June 2024**
AI Engineer   *Bangalore, India*

- Streamlined an **Audio-to-Audio translation** product, incorporating three main modules: **Synchronization**, **Natural Spoken Language Translation**, and **Text-To-Speech with Voice Cloning**.
- **Engineered and deployed** a transformative **Text-to-Speech (TTS) pipeline**, achieving a **96.67% reduction in weekly audio book production turnaround time**, significantly surpassing traditional manual translation processes and enhancing operational efficiency.
- Enhanced **IG Cash for Instagram Reels** by upgrading it to process Instagram Reels, reducing output time from **120 to 17 seconds** through the implementation of **multi-threading** and a **KL divergence-based frame selection method**. Achieved an **80% reduction in unnecessary frames**, boosting efficiency and expanding affiliate link generation capabilities.

Unversity of New South Wales   **September 2022 – January 2023**
Research Intern   *Remote, Australia*

- Research focus: **Adversarial Bot Detection** using **Generative Adversarial Neural Network**.
- Investigating **adversarial machine learning methods** to detect distributions facilitating classification between **automated** and **human-controlled accounts**. Curated and processed a dataset of **100,000 classified accounts**.

Projects

Advanced Duplicate Question Detection System | *PyTorch, Transformers, BERT, AdamW, DAX*

- Engineered and fine-tuned a state-of-the-art BERT model in PyTorch, achieving a **20% increase in detection accuracy** and a **15% reduction in overfitting** through strategic model optimizations.
- Executed comprehensive data preprocessing and tokenization using BertTokenizer, used a custom BertDataSet class to enhance batch processing efficiency by **30%**, and conducted meticulous model evaluation resulting in an impressive **F1-score of 0.85**.
- Integrated strategic enhancements that dramatically reduced false positives by **25%**, significantly improving the overall user experience.

Intelligent SOP Generator | *Java Spring Boot, MongoDB, LangChain, Falcon 180B, QLORA, Python*

- Developed a chat-based **Statement of Purpose (SOP) generator** using an in-house fine-tuned **LLM**, facilitating real-time, interactive user conversations via **WebSockets** and generating customized SOPs.Reduced SOP creation time by 80%
- Implemented dynamic **question parsing** and **knowledge extraction** using **LangChain**, enabling the AI to generate contextually relevant follow-up questions and enhance user interaction quality.
- Orchestrated seamless integration between **frontend (Node.js)** and **backend (Java Spring Boot, MongoDB)** systems, ensuring smooth data flow, user authentication, and effective SOP generation.

In-App Potato Disease Classification | *Google Cloud Platform, FastAPI,CNN ,React Native,TensorFlow Lite*

- Reduced Detection Time by 40% through implementing a CNN model, improving the accuracy to 95% for detecting early and late blight in potato plants.
- Optimized Model Deployment using **FastAPI** and **TensorFlow Serving**, enabling real-time API responses with an average latency of under 100ms.
- Built a Scalable Solution deployed on **Google Cloud Platform**, handling over 10,000 requests per month and integrating seamlessly with **React.js** frontend and **React Native** mobile app.

Technical Skills

Languages: Python,C++, SQL, Java
Tech Stack: Pytorch, Tensorflow, Keras, FastAPI, Flask, Spring Boot
Tools: Linux, Docker, Anaconda, Tableau, Power BI, Git & Github, Bitbucket, Gitlab, Postman
Cloud services: AWS EC2, AWS S3, GCP (Cloud run)