Siddharth Gandhi

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EDUCATION

Indian Institute of Technology Kharagpur

Bachelor of Technology Biotechnology; GPA: 8.55

West Bengal, India

July 2019 - April 2023

Relevant Courses: Programming & Data Structures, Probability & Statistics, Big Data Processing, Theory of Operating System

Work Experience

Kwal Inc. Remote

Founding Fullstack Engineer

July 2023 - Present

- o Built backend microservices with Express and TypeScript for interview scheduling, sending notification alerts
- o Developed an interview analytics pipeline with Deepgram and GPT-40, for call summarization & intent detection
- o Integrated Azure Monitor for logging, tracing, and custom alerts, improving system reliability and observability
- o Implemented server-side pagination, filtering, and sorting on data tables, enhancing efficiency and experience
- Built a synchronized recording-transcript player with Wavesurfer.js for interview playback & search functionality

Optum — United Health Group

Remote

Product Intern

May 2022 - Jun 2022

- o Conducted secondary research, analyzed market trends along with mapping customer journey & behavior
- Identified multiple touch points in the customer journey and recommended a 3-pronged strategy to optimize CX
- Built an ML classification model to analyze 10,000 customer verbatim messages and achieved an 82% accuracy

PROJECTS & COMPETITIONS

Voice-Enabled Document Q&A System

Dec 2024

Real-time question answering on documents using voice interactions

Github

- o Developed a voice-based RAG system which can process text-based(.txt, .pdf, .docx) documents for retrieval
- Used LangChain for processing, Cohere's embedding model and Pinecone for vector storage and similarity search
- o Integrated Deepgram STT and TTS for real-time speech transcription and synthesizing with 300 ms endpointing
- Utilized Groq's LLaMA3-70B model for generating contextually accurate answers based on retrieved segments

Audio Canvas Oct 2023

Voice enabled image generation

Github

- An application designed to interpret and process user's voice commands to generate visual images autonomously
- o Built a responsive Next.js 13 app with FastAPI(python) backend to process the raw audio input from the user
- Used Deepgram nova-2 for transcription, GPT-3.5 for command interpretation, & DALL-E for image generation

COVID-19 detection using chest radiographs

July 2022

Build an ML model that detects COVID-19 from chest X-ray images, aiding quick and reliable diagnoses

- Used YOLO-V5 to identify and localize COVID-19 abnormalities in a dataset of 6,000 chest X-radiographs
- Applied EfficientNet-B7 and ResNet for classifying chest radiographs based on the severity of COVID-19

Open-Soft — Technology Students Gymkhana — 2nd position

Feb 2022

Create a food delivery application to ensure the availability of essential services during downtime

- o Developed a horizontally scalable Food Delivery application using a microservice architecture with 4 services
- Built REST APIs using DRF and connected the services using API Gateway and JWT for token authentication
- Created a Twilio Messaging Service for sending delivery messages and integrated Razorpay for payment service

SKILLS SUMMARY

• Languages: TypeScript, Python, C, C++

• Frameworks: Nextjs, Express, Django Rest Framework, Tailwind CSS

• Tools: Git, Supabase, Twilio, Sendgrid, Azure

Awards & Achievements

- Achieved 2nd rank among 50+ students in the Department of Biotechnology & Biochemical Engineering at IIT KGP
- Captain of Hall Squash team and Secured 1st position in the Squash General Championship 2023 at IIT Kharagpur
- Selected as one of the top 3000 students nationwide to participate in the Amazon ML Summer School of 2022
- Secured 3rd position in Match Olympiad competition organized in the Kshitij Tech Fest at IIT Kharagpur