

NIKHIL SURESH NAIR

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EDUCATION

The University of Texas at Austin Master of Science, Business Analytics [GPA: 3.7/4]	May 2024
National Institute of Technology Karnataka Bachelor of Technology, Mining Engineering [CGPA: 8.1/10]	May 2021

WORK EXPERIENCE

Microsoft — <i>Capstone Project</i> , Austin, Texas	Jan 2024 - Current
Working on a Capstone Project focused on optimizing Copilot's understanding of tabular data. Includes analyzing an LLM's limitations with tabular data, implementing pre-ingestion transformations to improve data processing and comprehension, and creating a system for detecting and preparing article updates for efficient ingestion and indexing	
ZS Associates — <i>Decision Analytics Associate</i> , Bangalore, India	July 2021 - May 2023
- Conducted a patient journey analysis for a Fortune 500 Pharma client in oncology leveraging patient-level data and business rules, revealing the potential for a near 15% increase in market share - Conducted hypothesis testing on market data with a K-Means clustering model to analyze doctors' prescribing behavior patterns by specialty and location, aiding the marketing team in refining their customer targeting strategies - Managed a team of 3 to modify an in-house SaaS solution for client-specific requirements	
Learnogether — <i>Machine Learning Intern</i> , Bangalore, India	May 2020 - July 2020
- Developed a web scraper inspired by a Stanford research paper, incorporating SVM models for smart text extraction - Developed a JavaScript function to manually tag 10 sample websites, creating approximately 500 samples for training - Employed various NLP techniques like NER for precise key word and key phrase extraction, allowing for text tag generation	

PROJECTS

MIA — (<i>LLMs, RAG, AWS</i>)	Dec 2024 - Present
- Led the creation of an AI companion Android app with passive, always-listening functionality - Created a scalable backend with AWS S3 and Lambda for audio storage and processing, integrating LLM models such as Mixtral with OpenAI embeddings for efficient conversation recall via a Pinecone vector database - Implemented dynamic summarization for virtually unlimited context length and approximately 30% cost reduction - Designed an intuitive Android interface for seamless chatting and transcription management, enhancing user experience	
YouTube Shorts Generator — (<i>Generative AI, Scraper</i>)	Sep 2023 - Sep 2023
- Developed a fully automated pipeline for generating YouTube Shorts from Reddit posts within 2 minutes - Utilized PRAW for efficient content scraping and harnessed the capabilities of GPT-4-Turbo, Stable Diffusion, and ElevenLabs to expedite the creation of audio-visual elements, including thumbnails and voiceovers - Streamlined the video production process using OpenCV, coupled with the Google API for automated video uploads	
LifeLog — (<i>NLP, LLMs, Scraper</i>)	Feb 2024 - Feb 2024
- Developed a desktop activity tracking system with a tkinter GUI for capturing screenshots, webcam snapshots, and audio - Implemented multimodal models (LLaVA and Whisper) for text extraction from multimedia inputs, storing data in SQLite - Created an automated summarization algorithm to transform captured data into a daily narrative of user's desktop usage	

TECHNICAL SKILLS

- Programming Languages: SQL, Python, C#, JavaScript, Kotlin, Java, R
- Technologies: AWS, TensorFlow, Keras, Scikit-Learn, Pandas, Spark, Snowflake, PostgreSQL, Tableau, GitHub
- Other: Data Science, AI, Transformers,

ADDITIONAL INFORMATION

- Prototyping a Game Using GPT-4 for Social Engineering NPCs - [Blog](#)
- Building a Decentralized Social Platform for NFTs in 1 Week - [Blog](#)