DHANUSH ANUMAKONDA

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Education

Degree	Institute	Board / University	CGPA/Percentage	Year
B.Tech CSE	Indian Institute Of Information Technology Design And Manufacturing Kancheepuram, India	IIITDM Kancheepuram	8.38	2020-2024
High School	FIITJEE Junior College Hyderabad, India	TSBIE	96.4%	2018-2020

EXPERIENCE

Python Developer - Freyr Solutions   *Sept 2024 - Present*

Freya Fusion Chatbot UI & API Codebase Migration

- Migrated the **Freya Fusion Chatbot UI** codebase from **Angular** TS to **React** TS (Tyepscript).
- Created a POC and improved the overall performance, code readability of the UI functionalities by **12%**.
- Migrated the **Freya Fusion Chatbot API** from **.NET to Python**, enhancing performance, scalability, and maintainability.
- Designed and implemented **RESTful APIs** for seamless chat session management, enabling efficient retrieval, updates, and deletion of user conversations across tenants.
- Leveraged **FastAPI** for high-performance API development, **SQLAlchemy** for ORM handling raw SQL queries, and **Pydantic** for enforcing data validation and integrity.
- Used **Behave/Jest & RTL** for API testing for the API/UI integration and functional testing.
- Integrated **Ruff** for linting and maintaining high code quality, adhering to best development practices.
- Streamlined dependency management and package installation using **Poetry**, ensuring reproducible builds.
- Utilized **Azure DevSecOps** and **Git** for efficient source control, versioning, CI/CD pipeline integration and deployments to production environment.

Fusion ML Intern - Freyr Solutions   *Feb 2024 - Sept 2024*

SLP & DLP for Freya Chatbot Automate Module

- Developed an automated **Submission Level Planning (SLP)** and **Dossier Level Planning (DLP)** checklist generator for document validation.
- Implemented various PDF processing tasks such as document properties, metadata extraction, page chunking, orientation checks, and document tracking using **PdfPlumber, PyMuPDF, Unstructured, Aspose, PyPDF2, PikePDF**.
- Managed and validated **regional XML files, Global TOC Tracker, and Content Catalog Excel files**.
- Wrote comprehensive unit test cases using **PyTest** and **Unittest**, ensuring robust code coverage with **SonarQube** analysis.
- Utilized **Azure DevSecOps** for repository management, issue tracking, CI/CD pipelines, and production deployments in Agile environment.
- Developed a structured workflow using **aiboto3** to automate zip extraction, user folder task creation, and **Amazon S3** storage integration.

Automated Document Checklist, Ingestion, and QC Generation with Langchain & GPT-4 Turbo

- Enhanced the intelligent document checklist generator by leveraging **Langchain's** prompt templates and **GPT-4 Turbo** for automated validation.
- Optimized data ingestion by structuring metadata and checkpoints into a **schema-based Weaviate DB** for efficient storage and retrieval.
- Implemented **batch-wise ingestion** of text and metadata into the vector database, ensuring scalability and efficient handling of large document volumes.
- Tokenized and processed large-scale documents with **OpenAI's Tiktoken**, utilizing an extended **128K token context** for improved contextual understanding and comprehension.
- Implimented effective unit test and automation test cases using **Selenium**, **Pytest** and **Unittest.** (**Agile, scrum and Integration tests**.)
- Contributed to Agile/Scrum-based development life cycles by actively participating in sprint planning, story grooming, and QA validation tasks.

NLP Intern - Supertransalate.ai   *May 2023 - August 2023*
Video Subtitle Burn App using Deepgram Whisper ASR

- Created a video subtitle platform that burns subtitles directly onto a video.
- Utilized Deepgram Whisper Large speech model, cutting time and manual effort.
- Developed a user-friendly GUI using Streamlit and Localtunnel.
- Technologies: Deepgram OpenAI Whisper, Python, Tensorflow, MediaPipe, YOLOv6, MoviePy, NLP.

PROJECTS

MMOTU Tumor Detection Using EffDUCK-Net
Research Paper under Dr. Rohini P, Assistant Professor

- Developed a custom **EffDUCK-Net** architecture for segmenting ovarian tumor regions from ultrasound images.
- Designed an encoder using **EfficientNet**'s feature extraction blocks and a decoder combining **SOTA DUCK blocks** with **U-Net** for image reconstruction.
- Utilized the **MMOTU dataset** to train the model for accurate ovarian tumor segmentation.
- Achieved **state-of-the-art** performance with an **IoU of 76.32%** and **mIoU of 84.57%**.

Twitter Scraper with GPT-4 Vision Chrome Extension
Self-Made Chrome Extension Project

- Developed a **Chrome extension** to automate Twitter post scraping and capture screenshots by intelligently scrolling the webpage.
- Integrated **GPT-4 Vision API** to analyze tweets and provide a summary, enhancing user understanding of the post content.
- Designed and implemented a visually appealing UI using **CSS**, improving the overall extension usability.
- Utilized **OpenAI API calls** for content processing and analysis.

SKILLS

Frameworks / Tools: Langchain, LangGraph, LangSmith, CloudWatch, PyMuPDF, Aspose, Adobe SDK, Tensorflow, Keras, , OpenCV, Git, Streamlit , OpenAI, HuggingFace, NumPy, Pandas, Matplotlib, Seaborn, Weaviate, Libre Office.
Cloud Platforms: Azure DevSecOps, Azure ML Studio.
Programming Languages: Python, TypeScript (UI) & C.
Presentation & Developer Tools: Adobe, LaTeX, Chrome Extensions, MS Office.
Operating Systems: Windows & Linux.
Code Editors: VSCode, Cursor, Sublime Text.
Analytical / Soft Skills: Teamwork, Communication, Design Thinking, Critical & Analytical Thinking.

RELEVANT COURSES

AI/ML: Data Mining, Pattern Recognition, Big Data, Medical Image Analysis, Deep Learning, Machine Learning, Data Science.
CSE: Operating Systems, Device Drivers, Computer Networks, Data Structures, Algorithms, Theory of Computation, Probability, Statistics, Compiler Design.

CERTIFICATIONS

- AI Agents in LangGraph, September 2024
- ChatGPT Prompt Engineering for Developers, June 2024
- LangChain for LLM Application Development, March 2024
- Have done over **20+** certifications (**Refer LinkedIn**)

AWARDS AND RECOGNITIONS

- Won the **Team Impact Award 2024** at Freyr Solutions for the exceptional collaboration and the remarkable results of our department to the company's growth.
- Being a **National level table tennis** player, won medals in many State and National ranking tournaments.
- Received the **Best All Rounder Award** in high school for exceptional excellence in both academics and sports.