Aditya Gedela

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Professional Summary

A Data Science professional with 5+ years of experience, holding an M.Tech in DS. I specialize in designing scalable AI solutions, leveraging technologies like Machine Learning, Deep Learning, Computer Vision, NLP, and advanced techniques such as Generative AI and LLMs. With a strong background across the entire AI lifecycle, I have successfully delivered innovative solutions for diverse industries.

Education

Birla Institute of Technology & Science, (BITS) Pilani — **Nov 2021- Oct 2023**
M.Tech in Data Science and Engineering - Work Integrated Programme — CGPA: 8.1

Indian Institute of Information Technology, Sricity, Chittoor — **Aug 2015- May 2019**
B.Tech in Electrical and Communications(ECE) with Honors in Computer Vision — CGPA: 8.55

Experience

Data Scientist <— Associate Data Scientist, Entropik — **Aug 2021 - Oct 2024**

• Worked primarily in Chennai, India, with the opportunity to be based at the onsite location in Abu Dhabi from Aug 2022 to Feb 2024.
• Key projects include multi-face emotion detection and recognition, Copilot chatbot, AWS Lex bot, fraud detection, NLP pipeline, and Speech-to-Text pipeline, overseeing the entire process from solution design to deployment.
• Guided and mentored a team of 3 junior members across multiple projects, providing technical support and ensuring successful project execution.

Data Scientist(NLP) - Stride.AI, Bengaluru — **Jan 2020 - July 2021**

• Worked on transforming unstructured enterprise data into structured, actionable insights using Intelligent Process Automation (IPA) solutions. Key projects involved document information extraction and table extraction for major clients such as SG Paris, FMG Australia, Nasdaq, TradeLanes, and Natixis.
• Delivered ready-to-use tools like DocCompare and DocMapper, enabling clients to streamline operations and reduce manual quality checks by 80%.

Data Scientist - Merak.AI, Bengaluru — **July 2019 - Dec 2019**

• Developed solutions for extracting information from passport images, recognizing handwritten text, and detecting/classifying objects in documents to streamline data digitization.
• Generated synthetic data for application forms to enhance model training, contributing to scalable, efficient solutions for banking, finance, and healthcare industries.

Teaching Assistant, IIIT Sri City, Chittoor — **Aug 2016 - May 2019**
• Taught C, Computer Communication Networks, and Electronic circuits. Member of the Deans list for 2 semesters.

Skills

Languages & Frameworks	Python, SQL(Beginner), TensorFlow, Keras, Pytorch, Langchain
Libraries	OpenCV, NumPy, Pandas, Matplotlib, XGBoost, Sklearn, LightGBM, NLTK, Open AI, Hugging Face Transformers
Software Tools	Jupyter Notebook, Google Collab, Git
Concepts	Linear Algebra, Data Structures, Computer Vision, NLP, AWS Cloud Services, Deep Learning, Machine Learning, Generative AI

Projects

Multiface Emotion Recognition

• Developed a solution to analyze video conference recordings by extracting insights into participant emotions, attention levels, and engagement throughout meetings.
• Implemented advanced techniques including face detection, emotion recognition, and facial identification to assess real-time responses and improve meeting effectiveness to generate comprehensive actionable insights achieving an accuracy of 97% on emotion predictions and 95% on facial recognition.
• Tech Stack Used: Python, Dlib, Tensorflow, Keras, Sklearn, AWS Batch, S3, Lambda.

ChatBot - Decode Copilot

• Developed an AI chatbot that extracts actionable insights from large volumes of unstructured data from documents such as PDFs and PPTs.
• Integrated OCR for text extraction and generated word embeddings, which were stored in a Vector DB for efficient retrieval of information based on the user query.
• Tech Stack Used: Python, AWS OpenSearch, DynamoDB.

ChatBot - Qatalyst Copilot

• Developed an AI chatbot that efficiently extracts actionable insights from structured qualitative data which are stored in a DataFrame format.
• The chatbot enables users to quickly retrieve valuable information, streamlining decision-making, and significantly improving access to critical insights. Optimized query response time, reducing the time to answer complex queries by over 70%, compared to the traditional manual process.
• Tech Stack Used: Python, Langchain, OpenAI.

Fraud Detection

• Developed a fraud detection system to enforce eligibility requirements for test participation, based on age, gender, and demographics, ensuring compliance with the one-time participation rule per user. This reduced potential fraud attempts by 80% and improved overall user compliance.
• Tech Stack Used: Python, Deepface, OpenCV, AWS Rekognition

NLP Pipeline

• Engineered a robust data pipeline that extracted actionable insights, such as summaries and key highlights from transcripts; enhanced initial Hugging Face model functionality by incorporating OpenAI's LLMs to improve accuracy.
• Tech Stack Used: Python, NLTK, HuggingFace, OpenAI, AWS S3, AWS SSM

Activity Recognition in Egocentric Videos

https://www.researchgate.net/publication/331987453_Activity_Recognition_in_Egocentric_Videos_Using_Bag_of_Key_Action_Units

• Designed and implemented an extended Bag of Visual Words (BoVW) model to efficiently recognize activities in egocentric videos using MATLAB. The model improved computational efficiency by leveraging the assumption that a subset of the video contains sufficient information for accurate action identification.
• Published the research as part of the Proceedings of ICVGIP 2018, IIIT Hyderabad.

Hand Gesture Recognition

• Developed a MATLAB-based system to recognize American Sign Language(ASL) letters from hand gestures captured via webcam, using k-means clustering for segmentation and morphological operations for noise removal.
• Designed a recognition algorithm that analyzes thumb, little finger, finger count, and hand-raising to classify gestures accurately into corresponding ASL letters.