Phaneendra Ganji
Machine Learning Engineer

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SUMMARY

ML Engineer proficient in data analysis, statistical modeling, and machine learning. My expertise is showcased in leading the development of a groundbreaking Mental Health Chatbot, leveraging Large Language Models (LLMs) and cutting-edge NLP techniques. Additionally, I specialize in business intelligence, optimizing course content and platform features to enhance user engagement and satisfaction. With a robust project management background, I've orchestrated collaborative efforts and delivered impactful solutions across diverse domains. Furthermore, I bring a heightened focus on Generative AI, driving innovation in data science and AI through pioneering initiatives.

KEY SKILLS

Data Analysis: Cleaning, Manipulation, EDA, Pattern Extraction
Statistical Analysis: Hypothesis Testing, Regression, A/B Testing
Data Visualization: Tableau, Power BI, Matplotlib, Seaborn
Programming: Python, C, C++, Java, R, Flask, Django
Database Management: SQL, MySQL, MongoDB
Cloud Platforms: Google Cloud Platform, AWS
Machine Learning: Decision Trees, Random Forest, Logistic Regression, Clustering, NLP
Deep Learning: Neural Networks, CNNs, RNNs, GANs
Big Data: Hadoop, Spark
Tools: Jupyter Notebook, Git, Github, Excel, Google Analytics, Jenkins
Gen AI: RAG models, LLMs. Llama index, LangChain, Vector DB, Embeddings, Retreaval

EDUCATION

Master of Science in Data Science and Analytics	Aug '22 - May '24
Florida Atlantic University	Boca Raton, FL
PGD in ML and AI	Jul '20 - Aug '21
IIIT Bangalore	Bengaluru, IN
B. Tech. in Computer Science	Jul '16 - Jul '20
Sphoorthy Engineering College	Hyderabad, IN

PROFESSIONAL EXPERIENCE

Lead ML Engineer — Jan '24 - Mar '24
Omdena

- Developed the LLM Mental Healthcare Chatbot utilizing **LLama2 & Mistral models**, with a team of 6 members for natural language processing functionalities
- Enhanced LLM performance by seamlessly integrating **RAG pipeline** with scraped data sources
- Performed RASA framework for user interaction, integrating voice assistance and enhancing chatbot functionality
- Improved patient outcomes by **20%** through the development of a **mental health chatbot** utilizing natural language processing

Student Consultant — Jan '23 - Feb '24
Florida Atlantic University

- Guided peers in increasing **proficiency in data science** through personalized instruction in Python, R, & SQL
- Offered **industry-knowledge-based solutions** during individual consultations to enhance professional performance
- Led a student consultant team, ensuring seamless communication, coordination, and timely project completion.
- Accelerated project delivery by **one week** through strategic task scheduling to effectively balance academic, consulting, & personal commitments

Data Analyst — Jan '20 - Jul '22
Academic Affairs.in

- Conducted data analysis to align curriculum with industry demands, boosting course enrollment by 30%

- Defined key performance indicators for courses, improving student satisfaction by 20% and aligning content with industry standards
- Monitored user engagement, increasing session duration by 25% and optimizing platform features for higher retention
- Optimized user experience by implementing data-driven improvements using **Google Analytics**, resulting in a 15% reduction in bounce rate
- Improved course content & platform experience based on user satisfaction scores, achieving a **20% increase** & refinement of interface & technology

Business Intelligence Analyst
Jan '20 - Jul '22

Academic Affairs.in

- Boosted student engagement by **20%** within three months through **strategic analysis** of resource utilization & efficient allocation
- Ensured tailored learning experiences, achieving a 25% reduction in resource wastage
- Developed dropout prediction models, improving accuracy by 30% through advanced analytics
- Implemented interventions to prevent attrition, reducing dropout rates by 15% through proactive support

PROJECTS

Mental Health LLM chatbot
Jan '24 - Mar '24

Omdena

Lead Machine Learning Engineer
- Led the development of a Mental Health Chatbot leveraging Large Language Models (LLMs) to analyze social media impact on mental health.
- Utilized RAG, Mistral LLM, Chroma DB, and Streamlit for chatbot interface development, deployed using Huggingface.
- Employed LangChain framework throughout the project.
- Gathered depression-related content in PDF format for user recommendations.
- Collaborated on model fine-tuning using SFT and DPO techniques.
- Delivered a user-centric Mental Health Chatbot capable of providing tailored recommendations for depression.
- Learnings about LLama2 llm, Ollama platform and LlamaIndex framework along with other LLMs on Huggingface.

Enhanced Image Gallery Flask Web Application
Jan '23 - Mar '23

Tech Stack: Flask, Google Cloud Storage, Firebase Authentication, Pyrebase, PIL, MarkupSafe, Git, Google Cloud Run.
- Enabled multi-factor authentication using **Firebase Authentication** to bolster data privacy & enhance overall data security
- Image Gallery Functionality: Developed a user-friendly image gallery allowing users to securely upload, view, and manage their images.
- Utilized PIL to extract metadata, including **EXIF data** from uploaded images, significantly enhancing user experience
- Implemented Git integration with Google Cloud Run to enable **CI/CD**, reducing deployment time & utilizing Docker for seamless updates
- Secure Image Storage: Stored images securely in Google Cloud Storage, ensuring data integrity and accessibility through signed URLs while maintaining scalability and reliability.