Pallab Saha

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PROFESSIONAL SUMMARY

Analytically driven AI/ML professional with nearly 4 years of experience leading data science initiatives and building intelligent, production-grade systems using Python, machine learning, and cloud technologies. Specialized in statistical analysis, predictive modeling, and end-to-end data pipeline development for enterprise AI platforms. Proven track record of collaborating with business stakeholders, driving proof-of-concept (PoC) development, and leading cross-functional teams to deliver scalable solutions that optimize ML model performance and generate actionable insights. Academically trained in Robotics and Mobility Systems from IIT Jodhpur, with industry-recognized certifications in Azure AI and Google Cloud ML Engineering. Passionate about applying advanced analytics and machine learning to solve real-world business problems.

WORK EXPERIENCE

Sr. Developer at **Cognizant Technology Solutions** *(Kolkata, WB, India)*　　`Feb 2022 - Present`

- Led a 6-member analytics team to develop comprehensive engagement and interaction reporting systems for enterprise AI platforms, implementing statistical analysis and machine learning models to extract actionable insights from user behavior data using **Python**, **SQL**, and **Azure ML** services.
- Designed and deployed end-to-end data pipelines for real-time conversation analytics, user sentiment analysis, and performance optimization of LLM-integrated systems, leveraging **Azure OpenAI**, **TensorFlow**, and cloud-based **MLOps** practices to drive data-driven decision making.
- Led the end-to-end development and production deployment of the **reporting module** for a **RAG-based chatbot** supporting infrastructure IT issue resolution, delivering real-time dashboards to visualize engagement, resolution rates, and model performance.
- Designed data schema models and automated pipelines to aggregate and analyze conversation logs, user interactions, and feedback data using **Python**, **SQL**, and **Azure ML**, in coordination with a dedicated **AKS DevOps team**.
- Integrated **OpenAI GPT-4.1 APIs** for intelligent data summarization and **time-based trend prediction**, enabling proactive insights into chatbot usage and system performance over time.
- Applied advanced analytics and predictive modeling techniques to optimize chatbot effectiveness, user satisfaction prediction, and workflow automation success rates, creating interactive data visualizations and automated reporting systems using **Python** (**Matplotlib**, **Plotly**) that improved business intelligence and model performance tracking.
- Developed robust backend systems for conversation logging, duplication filtering, and feedback analysis, implementing machine learning algorithms for continuous model enhancement and automated quality assurance processes.
- Engaged directly with business stakeholders and product owners to define requirements, develop and demonstrate proof-of-concept (PoC) solutions, and enable the team to take end-to-end ownership of feature development and production rollout.
- Collaborated cross-functionally to align AI/ML capabilities with business requirements, delivering scalable analytics solutions that enhanced user engagement metrics, system transparency, and data-driven insights for executive decision-making.

CERTIFICATIONS

- **AI-900 Azure AI Fundamentals**　　`Microsoft`
- **AI-102 Azure AI Engineer Associate**　　`Microsoft`
- **Cloud Professional Machine Learning Engineer**　　`Google`

EDUCATION

Master of Technology (M.Tech (Full-Time)) Robotics And Mobility Systems(IDRP)　　`2022 - 2024`
　Indian Institute Of Technology (IIT) (Jodhpur, Rajasthan, India)　　CGPA 5.93/10

Bachelor of Technology (B.Tech) Mechanical Engineering　　`2017 - 2021`
　Dr. Sudhir Chandra Sur Degree Engineering College (Kolkata, West Bengal India)　　CGPA: 8.35/10

Senior Secondary (Class XII) 2016
    Indira Gandhi Memorial High School(CBSE board) (Kolkata, West Bengal India)   Percentage: 62.40%

Secondary (Class X) 2014
    Julien Day School(CISCE board) (Kolkata, West Bengal India)   Percentage: 85.40%

SKILLS

- **Languages & Frameworks:** Python, SQL
- **Machine Learning & Deep Learning:** TensorFlow, PyTorch, Pandas, Numpy
- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Plotly
- **Computer Vision & NLP:** Transformers, Azure Cognitive Services (Vision, OCR, Speech, Language), Azure Document Intelligence
- **Cloud & MLOps:** Azure AI, Azure ML Studio, Azure OpenAI, Azure CLI, GCP (Vertex AI), MLFlow
- **Tools & Platforms:** Docker, Vertex AI Notebooks, GitHub