

Pallab Saha

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PROFESSIONAL SUMMARY

Solution driven AI/ML professional with 4+ years of experience and M.Tech in Robotics and Mobility Systems from IIT Jodhpur. Leading data science initiatives and building intelligent, production-grade systems using Python, Generative AI (Gen AI), and cloud technologies. Specialized in statistical analysis, predictive modeling, and end-to-end development for enterprise AI platforms. Proven track record of collaborating with business stakeholders, driving from proof-of-concept (PoC) development to production, managing a team of 6 and coordinating with cross-functional teams to deliver scalable solutions and generate actionable insights that drive strategic decision-making. Validated by Google Professional ML Engineer and Microsoft Azure AI Engineer (AI-102) certifications. Passionate about applying advanced analytics, artificial intelligence(AI), Computer Vision (CV) and machine learning (ML) to solve real-world business problems.

WORK EXPERIENCE

Sr. Developer at Cognizant Technology Solutions (Kolkata, WB, India)

Apr 2024 - Present 4 Y 1 M

- Managed a **6-member analytics team** to build enterprise engagement intelligence and reporting systems for AI platforms, applying statistical analysis and machine learning algorithms to generate actionable insights using **Python, SQL, and Azure ML**.
- Directed the full lifecycle (**discussion → PoC → production**) of a **Reporting & Analytics Module** for a RAG-based IT chatbot, serving **5,000+ enterprise users** and analyzing platform usage generated by **3M+ end-users**.
- Presented analytical outcomes and platform progress to **Directors, Senior Directors, Product Leaders, and Business Analysts**, enabling executive visibility into engagement trends, resolution performance, and system adoption.
- Architected scalable data infrastructure including schema design, automated batch pipelines, and aggregation workflows processing **~5 million conversation records per day**, supporting reliable enterprise-scale analytics and continuous model improvement.
- Designed and deployed end-to-end pipelines for conversation analytics, sentiment analysis, and feedback processing, enabling performance optimization of **LLM-integrated systems**.
- Deployed containerized analytics and ML services using **Docker** and orchestrated workloads via **Kubernetes (AKS)** to ensure scalable, reliable production monitoring and high-availability deployments.
- Implemented **GPT-4-based intelligent summarization** and predictive analytics workflows, prototyping forecasting approaches using **Prophet** and **SARIMA** before productionizing optimized models with **XGBoost** for proactive performance monitoring and trend forecasting.
- Automated reporting workflows through interactive **Matplotlib** and **Plotly** dashboards, reducing manual reporting effort from a **9-member operational process to a single monitoring role**.
- Collaborated with cross-functional teams including **AKS infrastructure, DBA, Performance Testing (PT), and SIT teams**, alongside product and business stakeholders, to deliver scalable analytics and AI capabilities from PoC through production rollout.
- Provided technical solution guidance for the Reporting Module, mentoring and supporting in architecture and implementation decisions, leading to successful production deployment.
- Championed adoption of **AI-assisted software engineering practices** across the team, introducing prompt-driven development workflows (**Copilot, Cursor, Windsurf, Claude Code**) that accelerated backend system delivery by **~80%**, compressing a projected **4-month development cycle** into **20 days**.

Programmer Analyst at Cognizant Technology Solutions (Kolkata, WB, India)

Feb 2023 - Mar 2024

- Promoted after one year due to satisfactory performance in technical delivery.

Programmer Analyst Trainee at Cognizant Technology Solutions (Kolkata, WB, India)

Feb 2022 - Jan 2023

- Successfully completed initial training and transitioned into a full-time role.

CERTIFICATIONS

- AI-900 Azure AI Fundamentals
- AI-102 Azure AI Engineer Associate
- Cloud Professional Machine Learning Engineer



EDUCATION

Master of Technology (M.Tech (Full-Time)) Robotics And Mobility Systems(IDRP)
Indian Institute Of Technology (IIT) (Jodhpur, Rajasthan, India)

2022 - 2024
CGPA 5.93/10

Bachelor of Technology (B.Tech) Mechanical Engineering
Dr. Sudhir Chandra Sur Degree Engineering College (Kolkata, West Bengal India)

2017 - 2021
CGPA: 8.35/10

Senior Secondary (Class XII)
Indira Gandhi Memorial High School(CBSE board) (Kolkata, West Bengal India)

2016
Percentage: 62.40%

Secondary (Class X)
Julien Day School(CISCE board) (Kolkata, West Bengal India)

2014
Percentage: 85.40%

SKILLS

- **Programming & Data:** Python, SQL, Pandas, NumPy
- **Machine Learning & Forecasting:** TensorFlow, PyTorch, XGBoost, SARIMA, Prophet, Statistical Modeling
- **Generative AI & NLP:** Transformers, RAG Systems, Azure OpenAI (GPT-4), Prompt Engineering, Azure Cognitive Services (Vision, OCR, Speech, Language), Azure Document Intelligence
- **Data Analysis & Visualization:** Matplotlib, Plotly, Power BI
- **Cloud & MLOps:** Azure AI, Azure ML Studio, Azure OpenAI, MLflow, Azure CLI, GCP Vertex AI
- **Deployment & Infrastructure:** Docker, Kubernetes (AKS), Batch Processing Pipelines
- **Tools & Platforms:** GitHub, Vertex AI Notebooks
- **Technical Leadership & Collaboration:** Technical Solution Design, Team Mentoring, Cross-functional Collaboration, Stakeholder Communication