Sourish Chatterjee

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EXPERIENCE

Machine Learning Intern   Nov 2025 – Present
JcurveIQ   *Remote*
- Supporting the development of **AI-powered research workflows** by working with **RAG pipelines**, **document ingestion**, and **retrieval systems**.
- Assisting in building features that help analysts get **citation-based answers** and surface **financial red-flags** from **SEC filings** and **earnings transcripts**.
- Contributing to improvements in **memo generation**, **ML tooling**, and internal **engineering workflows** as part of the **JcurveIQ** product team.

Data Analyst Apprenticeship   Jan 2024 – Feb 2024
Academy of Skill Development   *Kolkata, WB, India*
- Performed **EDA and statistical analysis** on NIFTY-50 time-series data, identifying volatility trends and designing **interactive dashboards** for actionable insights.
- Collaborated with a **4-member team** to produce **reproducible notebooks** and deliver insights for **stakeholders**.

PROJECTS

DeepTalks | *Hugging Face, PEFT, Transformers*   *Hugging Face*
- Fine-tuned a **Phi-2 (2.7B)** language model using LoRA with **3.5K+ samples**, optimizing compute efficiency while maintaining conversational quality.
- Enhanced **multi-turn dialogue coherence** and published the model on Hugging Face with **110+ downloads**.

Prompt2Frame | *FastAPI, Docker, Manim, FFmpeg*   *GitHub*
- Built a **modular 3-stage microservice pipeline** (Prompt Expansion → Code Generation → Rendering) for automated animation generation.
- Implemented **syntax validation, resource-aware rendering presets,** and **containerized deployment** ensuring reproducible and scalable execution.

NavAI-Guard | *TensorFlow , Scikit-learn, Hugging Face Space, GitHub*   *GitHub*
- Developed an **unsupervised autoencoder model** to detect anomalous vessel behavior in AIS data, achieving **95.7% accuracy** with a **2.3% false-positive rate**.
- Designed a **real-time data pipeline** for streaming AIS records (10K ships/min) and deployed interactive visualizations for operational insights.

ACHIEVEMENTS & CERTIFICATIONS

- Published a fine-tuned **LoRA adapter** on Hugging Face with **110+ global downloads**, contributing to the open-source NLP community.
- Secured a **Top 10** position in **SAP Hackfest 2025 (college level)** for developing an explainable AI-based fraud-detection portal using ensemble models and SHAP.
- **Mentored school students in STEM** for over 5 years, demonstrating strong leadership, communication, and teaching abilities.
- Completed multiple certifications, including: GCP Fundamentals, Gen AI Specialization & MOOCs (ML&CS).

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS
Frameworks: TensorFlow / Keras, PyTorch, Scikit-learn, Hugging Face
Developer Tools: Pandas, NumPy, Matplotlib, Docker, Git/GitHub, FastAPI, GCP (Fundamentals)
Core Competencies: Machine Learning, Deep Learning, Data Analysis, API Development, Model Deployment

EDUCATION

Meghnad Saha Institute of Technology   Kolkata, WB, India
Bachelor of Technology in Computer Science Engineering with Specialization in AI & ML   *June 2022 – July 2026*