

Soumyajit Ghosh

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EDUCATION

Future Institute of Engineering and Management
Bachelor of Technology in Electronics and Communication Engineering

Kolkata, India
2023 – Present

- Current CGPA: 7.3/10 (up to 5th Semester)

PROJECTS

End-to-End Smart Document Extraction System | *Python, PyTorch, Docker*

[Code](#) | [Demo](#)

- Fine-tuned LayoutLMv3 for token classification (F1: 0.83) and integrated DocTR for hierarchical OCR, outperforming Tesseract on complex/noisy layouts.
- Deployed a containerized Streamlit application on Hugging Face Spaces via CI/CD (GitHub Actions), ensuring zero-downtime updates from the main branch.
- Architected a PostgreSQL (Supabase) persistence layer with Semantic Hashing to detect and reject duplicate invoices (SHA-256 signature of Vendor + Date + Amount) in real-time.
- Designed a **Dual-Engine** fallback system where low-confidence ML predictions automatically trigger a deterministic **Regex engine**, ensuring deterministic coverage for business-critical fields.

TECHNICAL SKILLS

- **Languages:** Python (Advanced), C, PostgreSQL (SQL)
- **Deep Learning:** PyTorch, Hugging Face Transformers, DocTR (ResNet-50 OCR), LayoutLMv3
- **Computer Vision:** OpenCV, DocTR (Deep Learning OCR), Image Preprocessing
- **Backend & Database:** FastAPI, SQLAlchemy, Pydantic, Supabase, Streamlit
- **MLOps & Cloud:** Docker, CI/CD (GitHub Actions), Hugging Face Spaces, Linux (Ubuntu), Git

HACKATHONS

Hacktonix '25 Hackathon | *Xplorica, FIEM*

2025

- Secured **3rd position** in the hackathon organized by the Tech Club of Future Institute of Engineering and Management.

Smart India Hackathon (SIH) 2025 | *Internal Round*

2025

- Selected in the internal hackathon round representing Future Institute of Engineering and Management.

CERTIFICATIONS

Coursework & Training

- Coursera: [Python for Data Science, AI & Development](#)
- Coursera: [Supervised Machine Learning: Regression and Classification](#)
- Forage: [Deloitte Australia Data Analytics Job Simulation](#)