Debmalya Sanyal

Generative AI Engineer | AI/ML Engineer | Python Backend Developer

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LinkedIn | GitHub

Professional Summary

Generative AI and Machine Learning engineer experienced in building AI-powered products, LLM workflows, intelligent automation systems, backend APIs, and computer vision applications. Skilled in Python, TensorFlow, PyTorch, Flask, Django, and Streamlit with hands-on experience in deploying scalable AI solutions. First-author Springer Nature research publication in applied AI.

Technical Skills

Languages	Python, SQL, C
AI / ML	TensorFlow, PyTorch, Scikit-learn, NLP, Computer Vision, Deep Learning, Generative AI
Frameworks	Flask, Django, Streamlit, REST APIs
Tools	MySQL, Firebase, Git, Pandas, NumPy, Matplotlib, AI Agents, Prompt Engineering

Experience

Generative AI Analyst — iMerit Technology Jan 2026 – Present

- Worked on enterprise-scale generative AI workflows and AI-assisted annotation systems.
- Improved AI output quality and contributed to production AI pipelines.

Generative AI Engineer — Wavelaps Nov 2025 – May 2026

- Built LLM-powered automation tools and optimized inference performance.
- Collaborated on deployment-ready AI features and workflow automation systems.

AI Researcher — Coding Jr Feb 2025 – Apr 2025

- Developed ML pipelines and Flask APIs for enterprise AI copilot systems.

Python Developer Intern — VirtuNexa Jan 2025 – Mar 2025

- Improved backend API performance by nearly 20% through optimization.

Projects

Enterprise AI Copilot Platform

- Built an AI copilot integrating LLMs, conversational AI, and workflow automation.

AI-Powered Face Recognition System

- Developed a real-time FaceNet + MTCNN + OpenCV recognition pipeline.

Real-Time Object Detection System

- Built a YOLOv3 + OpenCV + Streamlit application for live object detection.

Biometric Attendance & Verification System

- Integrated fingerprint authentication, face recognition, and Firebase logging.

Research Publication

First Author — Springer Nature Publication

- Published research paper in *Discover Artificial Intelligence (Springer Nature).*
- DOI: 10.1007/s44163-025-00820-w

Education

Indian Institute of Technology Madras 2023 – 2028

BS in Programming & Data Science

JIS University, Kolkata 2022 – 2026

B.Tech in Computer Science & Engineering

Certifications

OCI Generative AI Professional | OCI AI Foundations Associate | Prompt Engineering | GenAI for Professionals