

Sahaj Saliya

AI engineer and B.Tech ICT student at PDEU, working on LLMs, NLP, computer vision, generative AI and agents.

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EDUCATION

Pandit Deendayal Energy University (PDEU)

Jun 2023 – May 2027

B.Tech in Information & Communication Technology (ICT) · CGPA 8.5 / 10 · Gandhinagar, Gujarat

EXPERIENCE

Research & Innovation Intern · HNNOIX India Private Limited

May 2026 – Jul 2026

Internship · Gurugram, Haryana · Hybrid

- Worked on 6G research and development: network architectures, AI agents and communication systems.
- Built reusable AI components (an LLM Gateway, a RAG Runtime, an AI Memory Layer and a Knowledge Base) for scalable agent execution, context management and workflow orchestration.
- Applied generative AI, LLM, RAG and agent-based methods to decision-making, context-aware retrieval and workflow automation for 6G network architectures.

Freelance Financial AI Engineer · Quantitative Investment Analysis

Dec 2024 – Jun 2025

Freelance · Remote

- Built 2 autonomous trading-signal systems with agentic AI and RAG that read market news, extract sentiment and emit structured signals in real time.
- Cut false-positive trade signals by 37% with filtering rules and confidence scoring.
- Built a CrewAI research pipeline on GPT-4, the Bloomberg API, Financial Modeling Prep and Alpha Vantage for automated earnings analysis.

PROJECTS

CrohnSight · Medical computer vision

2026

0.992 AUROC, lesion vs normal (CrohnIPI). Reading a capsule-endoscopy study means checking tens of thousands of small-bowel frames by eye. An ensemble of 10 EfficientNet-B2 models (5 folds × 2 seeds) at the native 320 px finds lesions in 7 classes, grades severity in 4 tiers and draws a heat-map over each lesion.

PyTorch · EfficientNet-B2 · ONNX Runtime · FastAPI · Next.js · Docker · github.com/SahajIVVIX-1/Crohn-Disease-Early-Prediction

Enterprise Agentic RAG Orchestrator · Multi-agent LLM system

2026

0.81 RAGAS faithfulness. Enterprise questions mix document lookups, database queries and actions such as sending email. A LangGraph Supervisor → Worker → Validator graph routes each query to Corrective RAG, NL-to-SQL, a human-in-the-loop email tool or chat.

LangGraph · LangChain · FastAPI · Qdrant · BM25 · Redis · Next.js · RAGAS · github.com/SahajIVVIX-1/Multi-Agent-RAG

OpenEnv Data-Cleaning Agent · Reinforcement learning environment

2026

0.967 PPO grader score on hard-clean. Cleaning a messy table takes many small, ordered decisions. An OpenEnv environment over pandas tables with reproducible (task, seed) episodes and a hidden clean ground truth.

OpenEnv · Stable-Baselines3 PPO · Llama 3.1 8B · Pydantic · FastAPI · Docker · HF Spaces · github.com/SahajIVVIX-1/open-env-nuclei

Explainable Student Performance · MLOps + explainability

2026

9 models benchmarked, explained with SHAP + LIME. A model that predicts which students will struggle is only useful if teachers can see why it made each prediction. Pandera-validated data and a ColumnTransformer pipeline feed a benchmark of 9 models: linear, tree ensembles, XGBoost, CatBoost, LightGBM, a PyTorch MLP, a PyTorch LSTM and FLAML AutoML.

scikit-learn · XGBoost · CatBoost · LightGBM · PyTorch · SHAP · LIME · MLflow · Docker · github.com/SahajIVVIX-1/student-performance-platform

5 stability fixes over the 2015 paper, each documented. The 2015 DCGAN is famously unstable, and most re-implementations show only a grid of blurry samples, never what the networks learned inside. Keeps Radford et al.'s all-convolutional architecture but swaps in an LSGAN loss, Spectral Normalization, a Xavier/Kaiming initialisation, discriminator dropout and label smoothing.

PyTorch · LSGAN · Spectral Norm · Matplotlib · Jupyter · github.com/SahajIVVIX-1/Modern-DCGAN-Reproducibility

SKILLS

Languages	Python, C++, SQL, MATLAB
AI / ML & GenAI	Machine Learning, Deep Learning, Computer Vision, NLP, Reinforcement Learning, LLMs, RAG, Tool Calling, Multi-Agent Orchestration
Frameworks	PyTorch, Transformers, LangChain, LangGraph, CrewAI, AWS Bedrock, Pydantic, FastAPI, ComfyUI
Data & Vector stores	Qdrant, ChromaDB, PostgreSQL, MySQL, MongoDB, Hadoop, HDFS, MapReduce
MLOps	MLflow, Docker, Kubernetes, Redis, Streamlit, ONNX, Hugging Face Spaces, GitHub Actions
Vision & OCR	OpenCV, OCR, Kraken, Image Processing, Document Image Analysis
Systems	Data Structures & Algorithms, OOP, Git, Networking, Linux / Windows administration

CERTIFICATIONS

- Agentic AI with LangChain and LangGraph · IBM
- Fundamentals of Building AI Agents · IBM
- AWS Generative AI and AI Agents with Amazon Bedrock · Amazon Web Services
- Deep Learning · IIT Ropar (NPTEL) (Score 66%)
- Data Structures & Algorithms with Python · Udemy

ACHIEVEMENTS & COMMUNITY

- **Guinness World Records participant · 2022:** Largest book (word count 2,121), achieved by Shree Swaminarayan Bhagwan and Param Pujya Sadguru Shree Gyanjivandasji Swami, Kundaldham, Vadodara, India, 18 May 2022.
- Lead Convener, IEEE AIMV 2025 · PDEU · 2nd International Conference on AI and Machine Vision (Aug 2025)
- AI/ML Core-Committee Member · Encode PDEU (Aug 2024 – Jul 2025)
- AI/ML Sub-Committee Member · Encode PDEU (Aug 2023 – Jul 2024)
- Volunteer Assistant · National Service Scheme (NSS), VIPS-TC (Jun 2023 – May 2024)
- Data Management (volunteer) · Swaminarayan Temple, Kundaldham & Karelibaug, Vadodara (since 2019)