Om Patil

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Summary

AI & Data Science undergraduate building LLM applications, RAG/research workflows, SLM fine-tuning pipelines, and AI-enabled backend services. Experienced with Python, structured generation, agent workflows, model evaluation, document processing, and API integrations. Open-source contributor focused on reliability, regression tests, and AI developer tools.

Education

AISSMS Institute of Information Technology, Pune *2023 – 2027*
B.Tech. in Artificial Intelligence and Data Science **CGPA: 8.10/10**

Experience

AskLumenAI Pvt Ltd *Jan 2026 – Present*
Founding AI/ML Engineer Manchester, UK
- Built AI research workflows for source ingestion, retrieval, citations, structured outputs, and personalization in a research-intelligence product.
- Converted requirements into implementation tasks; tested LLM outputs, debugged integrations, and improved backend workflow reliability.

ViksitHub *2024 – Present*
Student Founder | Product & Full-Stack Engineer Pune, India
- Built a startup-discovery marketplace with Next.js, React, TypeScript, Firebase, and Cloud Functions; implemented search, filtering, and ranking.

Nexyom Inc. *Jun 2025 – Aug 2025*
Data Science Intern California, USA
- Built data workflows for document extraction, classification, verification, PII handling, and structured outputs.

Xerxez Solutions Pvt. Ltd. *Feb 2025 – Jun 2025*
GenAI Intern Bengaluru, India
- Built REST APIs and AI-assisted backend services; cut query response time 45% & improved backend performance 25%.
- Integrated AWS S3, PDF parsing, WebSockets, and external APIs into document-ingestion workflows.

Open Source Contributions

GitHub Contribution Overview GitHub | Portfolio

GitHub Footprint: 80+ Public Repositories | 17.1K+ Profile Views | 52.3K+ Repository Views

Merged Pull Requests

- **pypdf** #4100 | **Docling** #4188 | **DataChain** #1980
- **Railtracks** #1693 | **MCP Memory Service** #1554 | **HiveGate** #114
- **Automatos AI** #1142 | **Chatflow Agent** #57 | **AgentOS** #380
- **Optuna** #6923 | **Pixeltable** #1792

Open Pull Requests

- **DVC** #11105 | **LiteLLM** #47891 | **LightRAG** #4252
- **CrewAI** #8432 | **Inspect AI** #6057 | **Browser Use** #6187
- **Instructor** #2835 | **smolagents** #2960 | **DSPy** #10564

Projects

SupportLM V1.0.2 – Support Ticket Triage SLM Python, Qwen2.5-1.5B, LoRA, MLX, PEFT
- Fine-tuned Qwen2.5-1.5B-Instruct with LoRA for JSON-based support-ticket classification, summaries, and next-action suggestions.
- Implemented preprocessing and evaluation using a 4,000/600/600 train/validation/test split; reached 99.8% valid JSON output and 94.8% urgency accuracy on the held-out test set.

WARDEN – Autonomous Revenue Protection Agent Python, FastAPI, LangGraph, PostgreSQL, React
- Built a revenue-protection agent combining inventory, sales velocity, supplier pricing, lead times, and demand signals with BUY/WAIT/ESCALATE decisions, replenishment workflows, payment audits, and reconciliation.

Technical Skills

Programming: Python, C++, JavaScript, TypeScript, SQL, OOP
LLM / ML: Machine Learning, Deep Learning, LLMs, RAG, NLP, Prompt Engineering, Embeddings, Qwen2.5, Hugging Face, MLX, Fine-Tuning, LoRA/PEFT, NumPy, Pandas, scikit-learn, Evaluation, Structured Outputs
Agents / Retrieval: LangGraph, Multi-Agent Workflows, MCP / Tools, Pinecone, TF-IDF, Human-in-the-Loop, Guardrails
Backend / APIs: FastAPI, Node.js, Express.js, REST APIs, WebSockets, Async Python, Pydantic, SQLAlchemy, Alembic
Data / Storage: PostgreSQL, MySQL, MongoDB, Firebase / Firestore, Redis, Celery, AWS S3, ETL, Document Processing, PII
Frontend / DevOps: React, Next.js, Tailwind CSS, Vite, Docker, Git / GitHub, GitHub Actions, CI/CD
Security / Quality: JWT, OAuth2, RBAC, Rate Limiting, JSON Schema, pytest, Regression Testing, Validation, Debugging

Achievements

Winner – National Level AI Summit 2025 | **Runner-Up** – National Level Hackathon 2025

Certifications

Data Science, ML, DL & MLOps Bootcamp – Udemy | Google Cloud Study Jams – GDG Pune | OOP Champion – Pune