

ABHISHEK LALWANI

AI Engineer | Generative AI, LLMs & Agentic AI | Enterprise AI Solutions | RAG & AI Systems Engineering

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LOCATION
Pune, India

AI Engineer with 4+ years of experience in Generative AI, LLMs, and enterprise AI solutions, seeking opportunities in Enterprise Software & Technology across Generative AI & LLM Engineering, Agentic AI & AI Application Development, and AI Platform & MLOps Engineering.



PROFILE SUMMARY

- ❖ Gained expertise in Artificial Intelligence, specializing in Generative AI, enterprise AI integration, production systems, multi-agent orchestration, and semantic search; pursuing M.Tech. in AI/ML from BITS Pilani.
- ❖ Currently working as Senior Software Engineer at Dassault Systèmes, leading Generative AI initiatives spanning LLM assistants, enterprise integrations, and cross-functional MLOps practices.
- ❖ Delivered a production-grade RAG pipeline that reduced document retrieval time by 60%, improving information accessibility & user productivity.
- ❖ Developed LLM chatbot workflows serving 1,000+ users, while building GraphMind, a full-stack knowledge-graph retrieval platform as part of the M.Tech. AI/ML project at BITS Pilani.
- ❖ Applied MCP, LangGraph, Hermes, and agent-consumable endpoints to enable seamless AI-agent integration with enterprise applications and multi-agent workflows.
- ❖ Exhibited strengths as a Full-Stack AI System Builder & Integrator, with focus on Production-Grade AI Deployment & MLOps and Performance Optimization & Scalability.



CORE COMPETENCIES

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|--------------------------|-----------------------------|--------------------------------|
| Generative AI Strategy | Data-Driven Decision-making | AI Platform Engineering |
| AI Solution Architecture | Governance & Compliance | AI Deployment Management |
| Intelligent Automation | Agentic Workflow Design | Model Lifecycle Management |
| AI Product Development | Enterprise AI Integration | Cross-Functional Collaboration |



TECHNICAL SKILLS

- ❖ **AI/ML:** LLMs (GPT-4, Claude, Llama, Mistral), Production RAG Systems, LLM Integration, Agentic AI, LangGraph, Hermes, Multi-Agent Orchestration, Model Context Protocol (MCP), Semantic Search, Embeddings, Model Evaluation, LLM Inference, Knowledge Graphs, LangChain, LlamaIndex, Vector Databases (FAISS, Pinecone), Prompt Engineering, Fine-Tuning, NLP, MLOps, Ollama
- ❖ **Backend:** Python, FastAPI, Node.js, REST APIs, Full-Stack Development, Celery, Redis, Neo4j (NoSQL), SQL, Data Pipelines, MLflow
- ❖ **Frontend:** Typescript, JavaScript, Lit Element, Polymer, Redux, Web Components, HTML5, CSS3
- ❖ **Tools:** Docker, CI/CD, Unit & Integration Testing, Git, Agile, Scrum, scikit-learn, PyTorch, Pandas, NumPy



WORK EXPERIENCE

Dassault Systèmes, Pune | Jul 2022 - Present

Senior Software Engineer | Jul 2022 - Mar 2025

AI/ML Engineer – Generative AI & Agentic Systems | Apr 2025 - Present

- ❖ Designing and deploying enterprise AI solutions using Python, FAISS, embeddings, and semantic retrieval techniques.
- ❖ Operating LLM-powered assistants using GPT-4, Llama, and Mistral through LangChain-based application workflows.
- ❖ Orchestrating tool-calling sequences with human-in-the-loop checkpoints across complex AI task flows.
- ❖ Developing agent-enabled integrations that connect enterprise applications with intelligent automation workflows.
- ❖ Establishing model monitoring, version control, and scalable rollout mechanisms for AI application lifecycle management.
- ❖ Collaborating with product and domain teams to translate business requirements into scalable artificial intelligence solutions.
- ❖ Automating end-user query workflows through conversational AI, delivering measurable weekly productivity gains of 5–10 hours.

Frontend Web Developer – Web Components & Platform Engineering | Jul 2022 – Mar 2025

- ❖ Built high-performance web components using Lit Element, Polymer, and Typescript for an enterprise platform.
- ❖ Modernized legacy architecture with Redux and Typescript, enhancing UI/UX and driving 2–3x growth in customer adoption.
- ❖ Optimized rendering pipelines through performance profiling, reducing application load time by 50–75%.
- ❖ Implemented unit and integration testing frameworks to strengthen regression coverage and release confidence.
- ❖ Supported an enterprise platform serving 300+ customers and 2000+ users across business environments.



ACADEMIC PROJECTS

GraphMind - Knowledge Graph & Retrieval Platform | Jun 2026 – Present

- ❖ Architected and deployed a full-stack knowledge graph platform using FastAPI, Neo4j, Celery, Redis, and Lit/Redux, transforming documents, code, audio, video, and repositories into queryable knowledge graphs; delivered 330+ commits and 110+ tests.

- ❖ Conducted a cross-model evaluation across 3 LLMs and 35 questions, demonstrating improved retrieval faithfulness while reducing token costs ~2.4x through a graph-first retrieval mode.
- ❖ Developed an MCP server exposing entity search, graph traversal, and retrieval capabilities as JSON-RPC tools for MCP-compatible clients; added graph versioning, lineage, and deterministic tabular-data extraction with human-in-the-loop review, reducing input tokens ~2x.

Final Year Project - NGO Revenue Forecasting & Donor Segmentation | Jun 2022

- ❖ Developed an NGO revenue forecasting and donor segmentation solution using SARIMA, RFM, and K-Means to support data-driven revenue prediction and donor profiling.
- ❖ Published the project in the International Journal of Computer Applications (IJCA) in Jun 2022.

 EDUCATION

 **M.Tech. - Artificial Intelligence & Machine Learning** | BITS Pilani WILP | 2024 – Sep 2026 (Expected)

 **B.Tech. - Information Technology** | Savitribai Phule Pune University (MMCOE) | 2022

 ACHIEVEMENTS

- ❖ Earned the Applause Award – H1 2026 at Dassault Systèmes for contributions to Performance Study Migration and MCP Tools.
- ❖ Received the Applause Annual Award 2024 at Dassault Systèmes as a core team member for Inclusive Simulation Process Automation.
- ❖ Secured the Genius Award – H2 2023 at Dassault Systèmes in recognition of individual excellence and impactful contributions.
- ❖ Ranked as a Finalist in Smart India Hackathon 2020 for developing an AI-based career recommendation system for school students.

 PERSONAL DETAILS

Date of Birth: **XXX**
Languages Known: **XXX**