

## Arpit Jhamb

### Senior AI Engineer | AI Agents & Automations | Full-Stack AI Development

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## Professional Summary

Senior AI Engineer with 6+ years of experience architecting intelligent systems, AI agents, and automation platforms. Proven expertise in the full machine learning lifecycle including model training, validation, hyperparameter tuning, and model interpretability, alongside deploying scalable AI architectures using cloud services (Azure, AWS, GCP). Skilled in transfer learning, reinforcement learning, and explainable AI (XAI), delivering high-accuracy reasoning models and AI-driven tooling for developers. Deep expertise in data wrangling, feature engineering, real-time data streaming, and automated machine learning (AutoML), enabling data-driven decisions across startups, high-growth companies, and automation-centric enterprises.

Leveraging strong data engineering skills—ETL pipelines, data governance, and big data tools (Spark, Hadoop)—I transform raw data into actionable insights through advanced analytics, predictive modeling, and business intelligence solutions. Adept at designing AI models with responsible AI practices, ensuring compliance, fairness, and transparency to support enterprise goals and ROI-driven AI solutions.

Deep expertise in data analytics, data engineering, and data consulting—helping \$10M–\$50M companies and private equity (PE) portfolios unlock value by transforming raw data into automated, insight-driven business processes. Skilled at identifying operational bottlenecks, designing data pipelines, and building AI-powered automations that drive efficiencies and measurable ROI across diverse industries.

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## Skills

### AI & Machine Learning:

- LLMs & Agents: OpenAI, Claude, Mistral, Llama, LangChain, AutoGPT, Agentic architectures
- Reasoning & CoT, Small Reasoning Models (SRMs), prompt & chain-of-thought engineering
- Multimodal AI: voice synthesis/recognition, Image generation (Stable Diffusion, DALL·E), multimodal embeddings

### Software & Backend:

- Python (FastAPI, Flask), Node.js / TypeScript, REST / GraphQL APIs
- Full-stack: React, Next.js, Tailwind

### Data Analytics & Storage:

- Data Engineering & Analytics: ETL pipelines, Predictive Analytics, Real-time Data Processing
- Data Visualization: Looker Studio, PowerBI, Tableau
- Databases: PostgreSQL, MongoDB, Supabase, Firebase, AWS, Bigquery
- Vector DB / Graph DB: Pinecone,

### Agentic Tools & Business Automation:

- LangChain, AutoGPT, AgentBench frameworks
- Workflow & orchestration: n8n, Zapier, Make, Temporal
- AI-powered automation design for marketing, e-commerce, and B2C service workflows

### DevOps / Infrastructure:

- Google Cloud, AWS, Docker, Kubernetes, GitHub Actions, CI/CD, observability tools

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## Experience

### 1. Private Equity & Mid-Market Data Consulting

Worked with leading private equity firms including Incline Equity Partners and Riverside Company, focusing on \$10M–\$50M portfolio businesses.

- Structured company data ecosystems: built foundational data architecture, databases, and analytics platforms.
- Delivered tailored executive dashboards and front-end analytics solutions for C-suite and equity partners, driving data-informed decision-making.
- Improved operational efficiency by approximately 15% and marketing efficiency by approximately 20% through bespoke dashboarding and automation of analytics.
- Enabled enterprise-wide reporting and metric visibility, optimizing company performance measurement.

### 2. AI Agent Engineering & Automation

Partnered with 30+ organizations across B2C, e-commerce, and marketing sectors to design and implement agent-based automation.

- Architected advanced AI agent workflows, reducing manual effort and operational bottlenecks by 10–40%, depending on automation scope.
- Built and launched AI systems to generate, test, and audit smart contracts using natural language and symbolic reasoning—streamlining digital contract validation, vulnerability detection, and code similarity modeling.
- Integrated vector and graph databases to power multi-step automation, test-case generation, and agentic workflows for enterprise clients.

### 3. Enterprise Data Analytics & Engineering Projects

Trusted by brands such as Google, Neil Patel, GoodLifePlus, RedGifs, and Delta Airlines for high-impact analytics and data engineering solutions.

- Created end-to-end ETL pipelines and managed core database architecture to enable scalable analytics.
- Designed and built custom executive dashboards tailored to company goals, translating complex, multi-source data into actionable business insights.
- Spent over a year embedded with Google's Government Affairs and Public Policy department, developing internal analytics systems and dashboards for program management and strategic decision support.

### 4. Life Sciences/ Pharma Experience - Data Analytics and Data Engineering

Clients: Pfizer, Novartis, Lilly || Company: Axtria

- Delivered commercial and sales analytics solutions for global pharma clients, including target setting, incentive compensation, and territory alignment.
- Performed Marketing Mix Modeling (MMM) using multivariate linear regression to quantify channel contribution to sales and optimize promotional spend.
- Conducted goal setting and fairness analysis across brands using bi-variate and simulation models, ensuring equitable targets and optimal budget utilization.
- Developed sales tracking dashboards for new product launches and automated multiple reporting processes, improving efficiency 10x. Applied K-means clustering for product weight analysis to design balanced territory structures.
- Led end-to-end analytics delivery and Salesforce-based marketing performance tracking, enhancing multi-channel execution and revenue outcomes.

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## Key Achievements & Impact

- ★ Delivered measurable transformation for PE-backed firms – Reengineered data pipelines and analytics frameworks across multiple \$10M–\$50M portfolio companies, improving operational efficiency by 15% and marketing ROI by 20%.
- ★ Architected enterprise AI agent systems – Designed intelligent, agentic workflows automating marketing, data integration, and operational processes, reducing manual workload and cycle times by up to 40%.
- ★ Partnered with Google’s internal policy teams – Built AI-powered data visualization and analytics systems for strategic insights, directly supporting decision-making in Government Affairs and Public Policy.
- ★ Advanced AI infrastructure engineering – Combined vector and graph databases (Pinecone, Neo4j, FAISS) to model relationships, uncover anomalies, and enable enterprise-grade reasoning and evaluation.
- ★ Bridged data, AI, and strategy – Recognized for uniting deep technical engineering with strategic analytics consulting—helping Fortune 100 and mid-market enterprises turn complex data into automated, actionable intelligence.

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## Key Projects & Tooling

- Developed an AI-powered lead qualification agent that increased lead conversion by 25%, integrating seamlessly with CRM and communication tools to streamline pipeline workflows.
- Architected a full-stack marketing automation system that reduced manual tasks by 40% and enhanced customer targeting with AI-driven segmentation.
- Led end-to-end development of a voice-agent platform enabling spoken command execution across apps, achieving 90% user satisfaction in beta testing.
- Built an image generation and analysis pipeline that automatically evaluates image quality using custom metrics, improving prompt refinement through continuous feedback.
- Designed a real-time AI agent monitoring dashboard leveraging Supabase and advanced database visualizations, improving debugging speed and system reliability.

## Core Tooling & Technologies

- AI & ML: OpenAI, Claude, Mistral, LangChain, AutoGPT, Small Reasoning Models (SRMs)
- Programming: Python (FastAPI, Flask), Node.js/TypeScript, React, Next.js
- Data & Storage: PostgreSQL, MongoDB, Supabase, Pinecone, FAISS, Neo4j, Chroma
- Automation: n8n, Zapier, Make, Temporal, LangSmith
- Cloud & DevOps: Google Cloud, AWS, Docker, Kubernetes, GitHub Actions, CI/CD pipelines

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## Leadership / System Design Highlights

- Mentored 2–3 junior engineers and interns on agentic AI system development, conducting rigorous code reviews and establishing best practices for prompt versioning and evaluation pipelines.
- Architected complex multi-agent coordination frameworks, incorporating fallback strategies, toolchain orchestration, and checkpointing mechanisms for robust error recovery and system resilience.
- Defined comprehensive monitoring and observability standards for AI systems, including tracking bias, hallucination, accuracy drift, and implementing alerting, logging, and regular benchmark evaluations.
- Collaborated closely with cross-functional teams—including frontend, product, and security—to establish privacy, safety, and governance protocols essential for responsible deployment of AI-powered automation tools.