

ANAND VEMULA

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AI CONSULTANT | ENTERPRISE AI ARCHITECT

Snapshot

AI Consultant and Architect with 27+ years of experience in **designing and deploying intelligent systems**. Expertise spans **LLMs, retrieval-augmented generation, reasoning frameworks, memory architectures, and safe execution layers**. Adept at **rapid prototyping**, balancing innovation with pragmatism, and scaling AI from proof-of-concept to production. Strong record of aligning AI to **real-world business applications** and collaborating with global engineering and data science teams.

Core Competencies

- **AI & ML:** LLMs (GPTs), Deep Learning, Reinforcement Learning, NLP, Text Mining, Vector Search, RAG
 - **Agent Systems:** Reasoning Frameworks, Memory Architectures, Prompt Engineering, Safe Execution Layers
 - **Programming:** Python, SQL
 - **Frameworks:** TensorFlow, PyTorch, Scikit-learn, Transformers
 - **Data & Cloud:** Relational/NoSQL DBs, Pipelines, Azure, AWS
 - **Deployment:** Flask, Azure Functions, AWS Lambda, MLOps (Kubeflow, MLFlow, Airflow)
 - **Visualization:** Tableau, PowerBI, Plotly
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Professional Experience

Enterprise Architect – ThermoFisher (Contract)

Dec 2022 – Present

Project: Intelligent Virtual Assistant & AI Agent Development

- Designed **end-to-end intelligent agent systems** integrating **memory, retrieval, and reasoning frameworks**.
 - Fine-tuned **GPT-based models** for domain-specific tasks while ensuring privacy and safety.
 - Developed **data pipelines** (Python, SQL) for ingesting and transforming enterprise content.
 - Built **safe execution layers** for API integrations and agent-to-system communication.
 - **Achievements:** Established an **AI COE**, integrated **ChatGPT into enterprise apps**, significantly improving user workflows.
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Enterprise Architect – Mondelez (Contract)

Apr 2021 – Nov 2022

Project: AI Automation Agents & Digital Innovation

- Architected **AI-driven automation solutions** combining LLMs with deterministic workflows.
 - Implemented **vector-based retrieval pipelines** for knowledge-driven automation.
 - Designed **cloud-native deployments** (AWS Lambda, Azure Functions) for serverless execution.
 - Delivered **real-time monitoring** of agent accuracy, latency, and hallucination rates.
 - **Achievements:** Rolled out AI prototypes that evolved into production automation; supported **RPA + AI adoption** across business functions.
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Enterprise Architect – Independent Consultant

Dec 2017 – Present

Projects: Digital Transformation Platforms & AI Adoption

- Designed **agentic AI systems** with **reinforcement learning** and rule-based reasoning.
 - Prototyped and fine-tuned **LLMs** for custom enterprise use cases.
 - Built **retrieval-augmented systems** using vector search and semantic search pipelines.
 - Delivered **POCs and AI roadmaps** helping organizations accelerate AI adoption.
 - **Achievements:** Guided multiple clients in moving from **AI POCs → production deployment**, ensuring safety and scalability.
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Senior Principal – Digital Technology Head & AI Strategy – Verizon

May 2013 – Dec 2017

Project: Conversational AI & Intelligent Systems Strategy

- Directed **Kore.AI COE**, building conversational AI platforms with **NLP + deterministic querying**.
 - Built **predictive models** (kNN, Logistic Regression, Deep Learning) for customer behavior forecasting.
 - Deployed **machine learning models on AWS**, ensuring enterprise-grade scalability.
 - Advocated **DevSecOps practices** for safe AI deployment across XaaS platforms.
 - **Achievements:** Delivered **digital channel AI solutions**, aligning online sales with predictive analytics.
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Presales & Solutions Lead – Cognizant Technology Solutions

Mar 2012 – Apr 2013

Project: Big Data & Analytics Solutions

- Designed **predictive analytics models** (Regression, Time Series, Naive Bayes) to support client RFPs.
 - Built **Hadoop-based large-scale data processing** platforms.
 - Delivered **data pipelines** integrating structured and unstructured data for analytics.
 - **Achievements:** Secured **key client wins** by showcasing innovative Big Data + AI prototypes.
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AVP & Solution Lead – Mphasis (An HP Company)

Apr 2011 – Mar 2012

Project: Cloud & Analytics Proposals

- Developed **decision intelligence solutions** using Decision Trees, Random Forest, and k-Means clustering.
 - Leveraged **Azure + PowerBI** for analytics dashboards.
 - Supported presales with **AI-infused solution proposals**.
 - **Achievements:** Delivered **multi-million revenue pipeline**, strengthened analytics portfolio.
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Group Manager – HCL Technologies

Jun 2008 – Mar 2011

Project: Large-Scale Data Transformation

- Managed **end-to-end data transformation projects** with teams of data engineers.
 - Designed **predictive models** (SVM, Deep Learning – early adoption).
 - Built **ETL pipelines** for large-scale structured/unstructured data.
 - **Achievements:** Delivered **enterprise-scale data platforms**, enabling advanced analytics adoption.
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Senior Business Analyst – Take Solutions Ltd.

Dec 2006 – May 2008

Project: Data Migration & Predictive Analytics

- Developed **predictive analytics models** (Logistic Regression, Naive Bayes).
 - Managed **data migration and integration** for enterprise platforms.
 - Delivered **business intelligence dashboards** to improve decision-making.
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Product Manager / Business Analyst – NNIT Bangalore

Dec 1999 – Dec 2006

Project: Data Analytics Solutions

- Owned **full product lifecycle** for analytics solutions.
 - Built **regression & time series models** (Python/SQL) for forecasting.
 - Led teams building **BI dashboards and reporting platforms**.
 - **Achievements:** Delivered **data products** adopted by enterprise clients; streamlined analytics product lifecycle.
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Education

- MBA (Marketing & Information Technology), IIPM Delhi – 1999 (74%)
 - Dual Degree in Biotechnology, BITS Pilani – 1997 (CGPA: 7.47/10)
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Certifications

- Generative AI with LLMs – Coursera (DeepLearning.AI)
 - MLOps Foundations – AWS
 - Azure AI Engineer Associate
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Soft Skills

- Rapid prototyping & pragmatic execution
- Clear communicator (architecture, code, documentation)
- Collaborative team player with data science & engineering groups