Danial Amin

Senior AI/ML Consultant | AI Solutions Architect

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👤 Professional Summary

Senior AI/ML consultant with demonstrated success delivering enterprise AI solutions in consulting environments. Proven ability to translate client business requirements into scalable technical solutions, from initial discovery through production deployment. Specialized in RAG systems, agentic AI frameworks, and MLOps implementation for diverse clientele, including startups, scaleups, and enterprises. Strong track record of cross-functional collaboration, stakeholder management, and delivering measurable business impact through AI/ML initiatives. Currently available for new client engagements after successful completion of the Samsung Design Innovation Center project.

🛠 Core Competencies

Consulting & Delivery: Client Discovery & Requirements Gathering, Solution Architecture Design, Technical Proposal Development, Stakeholder Management, Cross-functional Team Leadership, Agile Project Delivery

AI/ML Solutions: RAG Systems, LLM Application Development, Agentic AI, Production ML Pipelines, Model Deployment, MLOps Architecture, A/B Testing, Feature Engineering

Technical Architecture: System Design, API Development (REST/GraphQL), Microservices, Data Pipeline Design, Cloud Architecture (Azure, GCP, AWS)

AI Frameworks & Tools: LangChain, LangGraph, LangServe, AutoGen, CrewAI, PyTorch, TensorFlow, Scikit-learn

Data & Vector Technologies: Pinecone, Weaviate, ChromaDB, FAISS, Elasticsearch, ETL/ELT Pipelines, BigQuery

Programming: Python, SQL, PySpark, Pandas, NumPy

DevOps & MLOps: Docker, Kubernetes, CI/CD, Git, MLflow, DVC, Azure DevOps

Cloud Platforms: Azure (Azure ML, AKS, OpenAI), GCP (Vertex AI, BigQuery), AWS (SageMaker)

Languages: English (C1), Urdu (C2), Punjabi (C1)

💼 Experience

AI R&D Consultant   Nov. 2024 - Present
INTM Groupe   *Paris, France*

    Client: Samsung Design Innovation Center (SDIC)
- ► Led end-to-end delivery of AI Design Companion (AIDC) project, managing client stakeholder relationships and translating design team requirements into technical solutions combining generative and predictive AI models.
- ► Architected multi-stage unstructured database serving as ground truth for AI applications, designing data ingestion pipelines and ETL workflows to support design optimization use cases.
- ► Developed production APIs using FastAPI to integrate AI capabilities into client's existing design workflows, ensuring seamless adoption and minimal disruption to current processes.
- ► Provided technical support for AI Research Companion (AIRC) project, implementing RAG architecture with vector databases for semantic search across design documentation, achieving 40% improvement in retrieval accuracy.
- ► Established MLOps practices including automated testing, model versioning, and continuous deployment pipelines aligned with client's infrastructure requirements.

AI & Data Science Lead   Sep. 2023 - Nov. 2024
i13 Ventures Studio   *Remote, Ireland*

- ► Provided AI/ML consulting services to 6+ startup clients, delivering enterprise RAG solutions using LangChain, Pinecone, and Azure OpenAI, implementing hybrid search strategies that reduced query latency by 60%.
- ► Built production agentic AI systems using LangChain and LangGraph for document processing, data extraction, and workflow automation, incorporating enterprise-grade error handling and monitoring.
- ► Established MLOps infrastructure including CI/CD pipelines, automated monitoring, and A/B testing frameworks, reducing model deployment cycles from weeks to hours.
- ► Designed scalable data pipelines processing 10TB+ monthly volume across multi-modal data (text, image, audio) using Apache Airflow and cloud storage solutions.
- ► Developed REST and GraphQL APIs for ML model serving with comprehensive security, versioning, and rate limiting for production environments.

Head of Data Analytics — Lead Data Scientist   Feb. 2023 - Sep. 2023
Abacus Global   *On-site, Pakistan*

- ► Led development of consulting practice and technical team, establishing service delivery frameworks and best practices for enterprise client engagements.
- ► Delivered end-to-end ML solutions for enterprise clients across multiple industries, establishing DevOps practices including containerization, orchestration, and automated deployment pipelines.
- ► Designed big data processing infrastructure on GCP using BigQuery, Dataflow, and Pub/Sub, implementing stream and batch workflows handling 5M+ daily events.
- ► Built RESTful APIs for predictive model deployment with load balancing, caching, and monitoring dashboards for production systems.

Technical Consultant - Data Science   Feb. 2022 - Feb. 2023
Automat Solutions Inc via Turing   *Remote, USA*

- ► Engaged as technical consultant to deliver smart battery optimization solution using deep reinforcement learning, implementing GPU-accelerated training pipelines and deploying models for edge inference with TensorRT.

- ▶ Built automated data pipelines processing 100K+ sensor data points per second with real-time anomaly detection capabilities.
- ▶ Developed Flask-based REST APIs for model inference with request queuing, caching, and monitoring achieving 99.9% uptime.
- **ML Consultant** — Feb. 2021 - Feb. 2022
  Omdena Inc — *Remote, USA*

  - ▶ Provided ML consulting services to two NGO/NPO clients, delivering computer vision solutions implementing transfer learning and model optimization techniques, achieving 12% accuracy improvement over baseline.
  - ▶ Built automated ML pipelines using Python and Docker for model training, evaluation, and deployment with version control and CI practices.
  - ▶ Developed FastAPI endpoints for model serving with batch prediction and real-time inference capabilities (sub-100ms latency).
- **Assistant Manager - Aerospace Analytics** — Aug. 2017 - Nov. 2022
  Government of Pakistan — *On-site, Pakistan*

  - ▶ Delivered predictive maintenance ML system for aerospace applications, building data integration pipelines and automated alert systems reducing maintenance costs by 35%.
  - ▶ Developed fuel consumption optimization models with comprehensive data preprocessing, feature engineering, and automated retraining schedules.

🎓 EDUCATION

- **Rennes School of Business** — Sep. 2023 – Sep. 2024
  Masters in Business Administration — *On-Campus, France*
- **MIT Institute for Data, Systems and Society** — Jan. 2024 – May 2024
  Data Science and Machine Learning: Making Data-Driven Decisions — *Distance Learning, USA*
- **University of Wisconsin, Madison** — Aug. 2022 – May 2023
  Micro Masters in Business: Data, Insights and Analytics — *Distance Learning, USA*
- **University of California San Diego** — Aug. 2021 – Mar. 2023
  Micro Masters in Data Science — *Distance Learning, USA*
- **Massachusetts Institute of Technology** — Aug. 2019 – Nov. 2023
  Micro Masters in Statistics and Data Science — *Distance Learning, USA*
- **Institute of Space Technology** — Sep. 2013 – Aug. 2017
  B.S in Aerospace Engineering — *On-Campus, Pakistan*

💻 KEY PROJECT DELIVERIES

- **AIDC - AI Design Companion (Samsung SDIC)**

  - ▶ Primary project lead delivering comprehensive AI design tool combining generative and predictive AI models for data-driven design optimization at Samsung Design Innovation Center.
  - ▶ Architected multi-stage unstructured database infrastructure serving as ground truth for AI models, implementing data pipelines for design data ingestion, processing, and retrieval workflows.
  - ▶ Built agentic AI system using LangChain for autonomous design assistance, implementing multi-agent workflows for design analysis and optimization recommendations.

  </> Tech Stack: Python, LangChain, LangServe, LangGraph, PyTorch, Directus, FastAPI, Docker
- **AIRC - AI Research Companion (Samsung SDIC)**

  - ▶ Supported delivery of RAG system for Samsung Design Innovation Center, implementing semantic search across design documentation and research materials.
  - ▶ Built hybrid data pipeline processing unstructured design and research data, implementing ETL workflows for document ingestion, chunking, embedding generation, and vector storage.

  </> Tech Stack: Python, LangChain, FAISS, OLLAMA, FastAPI, Docker, CI/CD
- **Bob - The Startup Advisor (i13 Ventures)**

  - ▶ Delivered enterprise RAG system using LangChain and Pinecone, implementing multi-stage retrieval pipeline with query optimization and reranking for startup evaluation across multiple innovation hubs.
  - ▶ Built scalable API infrastructure using FastAPI and LangServe with load balancing, rate limiting, and authentication, serving 500+ requests/hour.

  </> Tech Stack: Python, LangChain, LangServe, Pinecone, Azure OpenAI, FastAPI, Docker, Azure DevOps
- **Sandy - The Financial Advisor (i13 Ventures)**

  - ▶ Delivered agentic AI system using LangChain and LangGraph for autonomous financial analysis, implementing multi-agent architecture with specialized agents for data retrieval, analysis, and report generation.
  - ▶ Built data ingestion pipeline processing financial statements and market data, implementing ETL workflows with validation, transformation, and vector database storage.

  </> Tech Stack: Python, LangChain, LangGraph, Pinecone, Azure, FastAPI, Celery, Redis
- **Integrated Intelligence Platform (Abacus Global - Caribbean Banking Client)**

▶ Delivered comprehensive data pipeline architecture on GCP, implementing ETL workflows using Dataflow, BigQuery for data warehousing, and Looker for visualization across three departments.

▶ Built automated data ingestion from SAP S4 HANA, implementing data quality checks, transformation logic, and incremental loading strategies for real-time insights.

</> **Tech Stack**: GCP, BigQuery, Dataflow, Looker, Python, Cloud Run, SAP S4 HANA, Docker

✸ CERTIFICATIONS

- Expert Certification in **Artificial Intelligence** by **European Information Technologies Certification Institute**   [EITCA](#)
- Professional Certificate in **Data Analytics** by **Google**   [Coursera](#)
- Professional Certificate in **Project Management** by **Google**   [Coursera](#)
- Professional Certificate in **Data Science** by **IBM**   [Coursera](#)
- Specialization in **Deep Learning** by **Deeplearning.ai**   [Coursera](#)
- Specialization in **Natural Language Processing** by **Deeplearning.ai**   [Coursera](#)
- Complete Career track of **Data Scientist** by **365DataScience**   [365DataScience](#)
- Expert track in **Data Science Fundamentals on Microsoft Azure** by **CloudSwyft and Microsoft**   [FutureLearn](#)
- Nano degree in **AI Programming with Python** by **Udacity**   [Udacity](#)
- Developer Certification in **Data Analysis with Python** by **FreeCodeCamp**   [FreeCodeCamp](#)