

Dr. Adnan
Expert Big Data and AI Architect | ML | LLM | 23+ Years of Experience | Leadership in Software Industry | Senior Member IEEE

SUMMARY

- 23+ years in Big Data and AI architecture, specializing in scalable AI-driven systems, multi-agent automation, and NLP solutions.
- expertise in designing AI platforms for document processing, recruitment, semantic search, and generative AI applications.
- Strong academic foundation with a PhD in Information Technology and 100+ peer-reviewed publications, integrating research rigor into engineering practice.
- Led development of AI products like Talina.ai (AI-augmented HR sourcing) and DialTics (computer vision for call center analytics)
- Skilled in AI strategy, data analytics, and software architecture, bridging R&D with enterprise software delivery across diverse domains.

TECHNICAL SKILLS

Main Technical Skills	Architecture and Design Patterns (23 yr.), UML, RAG (2 yr.)
AI & Machine Learning	AI (23 yr.), Amazon Machine learning services, ChatBot (2 yr.), RAG (2 yr.)
JavaScript Libraries and Tools	p5.js (2 yr.)
Data Analysis and Visualization Technologies	Data Analysis
UI Frameworks, Libraries, and Browsers	Semantic UI (2 yr.)
Amazon Web Services	AWS big data services (12 yr.)
Google Cloud Platform	GCE
Methodologies, Paradigms and Patterns	Architecture and Design Patterns (23 yr.), FDD (2 yr.), UML
Platforms	Microsoft Power Platform (2 yr.), Quadient Automation (2 yr.)
Soft Skills	Research Skills (12 yr.)

WORK EXPERIENCE

Co-Founder and Data & AI Architect - Techtics.ai (Techtics.ai AI Solutions)

Duration: March 2022 – PRESENT

Summary:

- Led the design and architecture of intelligent AI systems including Generative AI, Agentic AI, NLP, and Data Analytics platforms
- Delivered scalable AI-driven solutions such as multi-agent automation frameworks, domain-specific chatbots, and platforms for document processing, recruitment, and semantic search across diverse industries

Responsibilities:

- Architected and developed AI solutions bridging R&D and real-world deployment.
- Guided teams in building analytics pipelines integrating structured and unstructured data.
- Ensured technical robustness and business alignment of AI products.

Technologies: Generative AI, Agentic AI, NLP, Data Analytics, Multi-agent automation frameworks, AI-driven platforms

Data and AI Architect (Unlayer Co-pilot for UI-UX Design and Email Management)

Summary: Designed the architecture and managed development of a co-pilot tool to customize UI-UX design for content development and large-scale automatic email management, enhancing user experience and automation capabilities.

Responsibilities:

- Architected system for UI-UX customization and email management automation.
- Managed development to ensure scalability and usability.

Data and AI Architect (Simpla.ai - Generative AI Tax and Accounting Advisor)

Summary: Designed the data and AI architecture for a Retrieval-Augmented Generation (RAG) based Taxation and Accounting advisor to assist service agents and customers with progressive, AI-driven financial advice.

Responsibilities:

- Developed AI architecture for tax and accounting advisory services.
- Enabled RAG-based AI to facilitate service agents and customers.

Technologies: Generative AI, RAG (Retrieval-Augmented Generation)

Data and AI Architect (MealTech Procurement Advisor)

Summary: Designed and developed a data analytics solution to optimize procurement processes and minimize costs using advanced analytics techniques.

Responsibilities:

- Developed data analytics models for procurement optimization.
- Implemented cost minimization strategies through analytics.

Technologies: Data Analytics



Data and AI Architect (Sign-Hub - Sign Language Repository and Translation)

Summary: Led the design and development of a comprehensive solution to support the deaf community in Pakistan by creating data repositories, translation models, and applications for students and teachers.

Responsibilities:

- Designed data repositories and translation models for sign language.
- Developed supporting applications for educational use.

Co-Designer and AI Strategist (Talina.ai - AI Augmented HR Sourcing Solution)

Summary: Co-designed an end-to-end AI augmented HR sourcing product including product conception, ideation, business analysis, and technology roadmap development.

Responsibilities:

- Led product conception and ideation for AI HR sourcing solution.
- Defined business analysis and technology roadmap.

Technologies: AI

AI Strategist and Solution Designer (DialTics - Call Center Agents Evaluation Solution)

Summary: Conceived and designed an AI strategy for a computer vision-based solution to analyze customer behavior using in-store video feeds, delivering real-time metrics such as footfall and traffic flow to optimize call center agent performance on low-power edge devices.

Responsibilities:

- Developed AI strategy for computer vision-based customer behavior analysis.
- Designed system for real-time metrics delivery and edge deployment.

Technologies: Computer Vision, AI, Edge Computing

Professor (Research and Academic Position) - University of the Punjab / Virtual University of Pakistan / University of Management and Technology, Pakistan (Information Systems Research Group Projects)

Duration: Feb 2012 – PRESENT

Summary:

- Led and executed various research projects advancing innovation in AI, NLP, Information Systems, and Education
- Supervised numerous graduate theses and PhD students, contributing extensively to academic research and knowledge dissemination

Responsibilities:

- Led research projects in AI, NLP, and Information Systems.
- Supervised 7 PhD students and over 30 graduate theses.
- Published over 100 peer-reviewed papers.

Technologies: AI, NLP, Information Systems



Research Fellow and Faculty Fellow - INTI International University, Malaysia; George Mason University, USA; Politecnico di Milano, Italy; Ecole Polytechnique Federale de Lausanne, Switzerland; University of Derby, UK (Research Fellowships at Leading Global Universities)

Duration: Jan 2006 – Present (various periods)

Summary: Engaged in advanced research fellowships and faculty fellow roles at multiple prestigious global universities, contributing to research in AI, Information Technology, and related fields.

Responsibilities:

- Conducted research and academic collaboration at international institutions.
- Contributed to scientific publications and academic development.

EDUCATION

- **PhD Information Technology**

Politecnico Di Milano, Italy
2012

- **Master of Information Technology**

National University of Science and Technology, Pakistan
2007

- **BS Computer Science**

National University of Computer and Emerging Sciences, Pakistan
2001

