Abdel-Fatah Karam

TECHNOLOGY EXECUTIVE & AI RESEARCHER — AI STRATEGY, ENTERPRISE TRANSFORMATION & GOVERNANCE

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PROFILE

Twenty years of director- and board-level accountability for enterprise systems across food production, retail, manufacturing, construction and real estate, alongside an active research position on measurement validity in AI evaluation. Currently MIS Director of a food production and retail group: technology strategy, an eight-figure EGP budget, and the systems serving 30+ sites and 1,500+ users, reporting to the group board.

Head of AI at MeetusVR, accountable for AI strategy and for a multi-tenant enterprise AI platform serving commerce, customer service, finance and analytics under a tiered commercial model. Retained by more than ten companies as AI advisor and lecturer. Doctoral research at Cairo University, with a journal manuscript under review. The research questions came out of operating the systems; the operating judgment comes from knowing what the evaluation evidence supports.

20+
Years at director level

10+
Companies advised on AI

6
Sectors led across

PhD
AI evaluation — defence Jan 2027

CAREER HIGHLIGHTS

- **Moved a group from reporting to prediction.** Demand forecasting and computer-vision quality inspection now operate in production on the line, reducing spoilage and defects reaching customers.
- **Established a complete technology function at a construction group with no prior in-house IT** — infrastructure, a custom ERP, a control framework and an eight-person team.
- **Re-engineered construction operations end to end**, integrating project sites, execution technical offices and procurement into a single workflow and removing a delivery bottleneck the business had carried for years.
- **Delivered ITGC, ITAC, SOX 404 and ISO 27001 control environments at three employers**, including under listed-company and state-ownership scrutiny.
- **Built and productised a multi-tenant enterprise AI platform**, with tiered service levels and self-service organisation onboarding, deliberately architected across multiple model vendors rather than tied to one.
- **Delivered a group-wide ERP programme on time and on budget**, spanning finance, supply chain, manufacturing, retail and HR.
- **Advised and trained more than ten companies** on AI strategy, architecture, governance and adoption.

EXECUTIVE SCOPE & ACCOUNTABILITY

Strategy & direction	Technology strategy and architecture standards; digital and AI transformation agendas; build-versus-buy and platform selection; portfolio prioritisation; multi-year roadmaps; operating-model design; vendor independence and concentration risk
Commercial ownership	Eight-figure EGP budgets, capital and operating; vendor and implementation-partner selection; contract and SLA negotiation; licence rationalisation; procurement; investment cases and cost-to-serve
Organisational leadership	Building and leading IT and IS departments; structuring teams around delivery rather than function; capability development, succession and retention; establishing internal AI capability
Board & stakeholder engagement	Reporting to boards and group holding companies; translating technology risk and investment into business terms; aligning finance, supply chain, production, commercial and HR leadership behind one systems agenda
Governance & assurance	Accountable owner for ITGC and ITAC control environments, SOX 404 compliance, ISO 27001 and COBIT-aligned GRC, access governance and segregation of duties, disaster recovery, business continuity and responsible-AI governance
Delivery accountability	ERP and enterprise programmes end to end — requirements, architecture, integration, migration, testing, cutover, go-live, hypercare and continuous improvement — across multi-site, multi-company groups

Languages Arabic (native); English (professional working)

AI LEADERSHIP — MEETUSVR

Head of AI — AI Agents, RAG & Machine Learning

2022 – Present

MeetusVR *Concurrent engagement*

Accountable for AI strategy and for the enterprise AI platform delivering it: a multi-tenant gateway serving commerce, customer service, finance and analytics for client organisations, deployed through a controlled pipeline across development, UAT and production.

Commercial and product architecture

- **Productised, not bespoke.** Structured as tiered service levels — basic, advanced and premium — so capability maps to price and the platform sells rather than being rebuilt per client.
- **Self-service onboarding.** Organisations are activated from the dashboard, with their catalogue, branches, delivery zones and content indexed automatically. Onboarding cost per client is close to zero, which is what makes a multi-tenant model viable.
- **Vendor independence by design.** Built across multiple model providers rather than committed to one, keeping concentration risk, pricing exposure and migration cost under control as the market moves.
- **Tenant isolation.** Each organisation's knowledge is indexed and served in isolation — a commercial and data-protection requirement before it is a technical one.
- **Running-cost discipline.** Only changed material is re-indexed, and consumption is measured per request, so unit economics stay legible as usage grows. AI programmes fail on running cost as often as on capability.

Capability delivered to client businesses

- **Specialised agents under a single router.** Sales, customer support, company information and orders, with intent classification directing each query, rather than one general assistant answering everything adequately.
- **Grounded in the client's own data.** Retrieval-augmented generation over each organisation's catalogue, branches, delivery zones and published content — the difference between an assistant that sells and one that invents.
- **Answers from the system of record.** Natural-language querying of operational data for the structured questions retrieval cannot serve.
- **Commercial intelligence.** Recommendation built on purchase behaviour, and scheduled competitive monitoring of rival catalogues and pricing.
- **Finance document intelligence.** Question answering over uploaded financial documents, scoped per organisation, user and document.
- **Service escalation.** Complaint and sentiment detection triggering human escalation, so the system knows what it should not attempt to handle.
- **Events and operations.** Event management, order enquiry and logistics support integrated with the client's operational endpoints.
- **Arabic as a first-class language.** Detection and orthographic normalisation so Arabic classifies as reliably as English — a differentiator in this market.
- **Embedded in the product.** Integrated into the VR environment itself rather than bolted on as a web widget.

Governance and operational control

- Authenticated access, structured logging and error capture, documented interfaces and health monitoring — the controls that let an AI system be audited rather than merely demonstrated.
- Per-tenant scheduled retraining, with classifier performance measured on accuracy, F1 and Cohen's κ under stratified validation. Model quality is a governed metric, not an assumption.

ADVISORY & THOUGHT LEADERSHIP

Corporate AI Advisor & Lecturer

2021 – Present

Independent practice *10+ private companies*

Retained by boards and executive teams to establish where AI creates value in their business and what it would take to realise it. Programmes run from board-level investment framing through to engineering practice, and are designed to leave capability behind.

Advisory mandate

- **Separating opportunity from theatre.** The most valuable service rendered is often telling an executive team which AI proposals are not technically viable, and why, before budget is committed.
- **Investment framing.** Prioritisation by return and feasibility, build-versus-buy, cost and risk exposure, and realistic expectations of what a pilot proves and what it does not.
- **Roadmaps that survive contact.** Use-case discovery, proof-of-concept design, and the pilot-to-production path most organisations never complete.
- **Operating model.** Establishing internal AI teams and centres of excellence, so capability accrues to the company rather than to a vendor.
- **Reducing dependence on generic tooling.** Organisation-specific retrieval and knowledge systems in place of off-the-shelf assistants that cannot see company data.
- **Translation.** Bridging executives, business departments, data teams and software engineers — the failure point in most stalled AI programmes.

Curriculum delivered

1. AI fundamentals	AI concepts and business applications; machine learning versus deep learning versus generative AI; supervised, unsupervised and reinforcement learning; AI maturity and organisational readiness; identifying high-value AI opportunities
2. Machine learning	Classification and regression; clustering and customer segmentation; forecasting and predictive analytics; recommendation systems; feature engineering; model training, testing and evaluation; overfitting, bias, accuracy, precision, recall, F1 and ROC-AUC; model deployment and monitoring
3. Data science	Data collection and preparation; cleaning and transformation; exploratory data analysis; statistical analysis; business intelligence and visualisation; data quality and governance; building data-driven decision-making cultures
4. Generative AI & LLMs	How large language models work; enterprise applications of ChatGPT-style systems; prompt engineering; structured output and tool use; LLM APIs and enterprise integration; model selection and evaluation; cost, latency and quality optimisation
5. Retrieval-augmented generation	RAG architecture; document ingestion and chunking; embeddings; vector databases; semantic and hybrid search; re-ranking; context construction; grounded enterprise assistants; hallucination reduction; RAG evaluation and monitoring
6. AI agents & agentic systems	Agent architecture; planning and reasoning; tool and function calling; memory systems; multi-agent architectures; human-in-the-loop workflows; autonomous business processes; agent orchestration; guardrails and approval mechanisms
7. Enterprise AI architecture	Connecting AI with ERP, CRM, e-commerce and internal systems; APIs and microservices; enterprise knowledge bases; data pipelines; AI gateways; model and vendor selection; cloud versus private deployment; security and access control
8. AI for business functions	Sales and marketing AI; customer-service automation; finance and forecasting; HR analytics and recruitment; supply-chain optimisation; inventory forecasting; e-commerce personalisation; recommendation engines; intelligent document processing
9. AI strategy & transformation	AI use-case discovery; prioritisation by ROI and feasibility; AI roadmaps; proof-of-concept design; pilot-to-production strategy; build-versus-buy decisions; AI operating models; establishing internal AI teams and centres of excellence
10. Responsible AI & governance	Data privacy; AI security; hallucination and reliability; model bias; human oversight; AI governance; risk classification; auditability and monitoring; responsible enterprise adoption

Outcomes for client organisations

The programmes move organisations along a defined progression — **data** → **intelligence** → **prediction** → **automation** → **AI agents** → **business transformation** — and are judged on movement along it.

- Management teams able to identify where AI creates measurable value, and to convert business problems into realistic machine-learning use cases.
- Executives equipped to reason about AI investment, cost, risk and expected return rather than defer to

vendors.

- Technical teams fluent in modern architectures — large language models, retrieval-augmented generation and agents.
- Corporate data recognised and governed as a strategic asset, with process-automation opportunities identified against it.
- Predictive analytics introduced for forecasting and decision support, and AI applied to customer experience, personalisation and e-commerce.
- Defined transformation roadmaps, and organisation-specific knowledge systems replacing dependence on generic tools.
- Raised standards of AI security, governance, privacy and responsible deployment.
- Organisations moved from experimentation toward production-ready systems.

RESEARCH & PUBLICATIONS

Doctoral research on measurement validity in AI evaluation: establishing when a reported score can be read as a verdict for the kind of answer it summarises, and when it cannot. The work builds a reproducible audit, run across multiple datasets, answer generators and retrieval conditions, that decides per dataset and answer type whether a result may be reported, qualified, or withheld. It is the diligence that belongs upstream of any board decision taken on an AI benchmark.

[2] A.-F. Karam, A. Helmy, A. Mohammed. **An approach to enhance KNN based on data clustering using K-medoid.** *2nd International Mobile, Intelligent, and Ubiquitous Computing Conference (MIUCC), IEEE*, 2022.

[1] A.-F. Karam, M. Embaby, H. El-Kady, S. Abdel-Hafeez, G. Nabil, A. Mohammed. **Applying convolutional neural networks for image detection.** *International Conference on Smart Applications, Communications and Networking (SmartNets), IEEE*, 2019.

SECTOR EXPERIENCE

Food production & retail	Multi-site manufacturing and a 30+ outlet retail estate: production planning, costing, quality, warehousing, POS, and demand forecasting
Construction	Project sites, execution technical offices, procurement and subcontractor management; project costing and progress control
Real estate — listed & state-owned	Property sales, contracts, collections and customer systems under public-company governance and regulatory scrutiny
Manufacturing & industrial	Textile and industrial operations across cotton, dyeing and allied businesses
Trading & distribution	Purchasing, inventory, replenishment and distribution across multi-entity groups
Technology & VR	Enterprise AI platform serving multiple client organisations under a tiered commercial model

EXECUTIVE EXPERIENCE

MIS Director

2021 – Present

Tseppas MG — *Food Production & Retail*

- Own the group technology agenda, reporting to the board, with accountability for an eight-figure EGP budget, two departments totalling 16 IT and IS professionals, and the systems serving 30+ production and retail sites and more than 1,500 users.
- Set direction for the group's enterprise landscape on Microsoft Dynamics AX — finance and costing, supply chain and warehousing, manufacturing, retail POS, sales and HR — and delivered its largest programme on time and on budget.
- Introduced production machine learning: demand forecasting across the group, and computer-vision quality inspection on the line, reducing spoilage and quality defects reaching customers.
- Improved month-end financial close, system availability, stock accuracy and management-reporting turnaround, with gains of 10–25% on the strongest measures.
- Own the control environment: ITGC and ITAC controls supporting external audit, SOX 404 compliance, and ISO 27001 / COBIT-aligned GRC across the group.
- Absorbed sustained workload growth through automation rather than headcount, consolidated vendor contracts, and strengthened the inherited backup and disaster-recovery position, within approved capital.

- Extended competitive monitoring across the group's principal market rivals, feeding pricing and range decisions from systematic data rather than anecdote.

Chief Information Technology Officer

2018 – 2021

CONSTEC — *Construction*

- Recruited to establish a technology function that did not exist. Built the infrastructure, core systems, a custom-built ERP and a team of 8, and set the standards the business continues to operate on.
- Identified the operational disconnect between project sites, execution technical offices and procurement, and designed an integrated workflow spanning site requisition, technical review, purchase request, supplier award and delivery to site.
- Materials reached sites faster as a result, and project managers, owners and contractors gained live visibility of progress for the first time.
- Digitised construction project management across project costing, progress tracking and subcontractor processes.
- Established IT governance, security and external-audit readiness, including ITGC and ITAC controls, in an organisation with no prior control framework.

Information Systems & IT Director

2015 – 2018

Heliopolis Company for Housing and Development — *Real Estate — publicly listed, state-owned*

- Led information systems for one of Egypt's largest developers, where governance, audit and public accountability were regulatory obligations rather than internal preferences.
- Implemented and upgraded the ERP, and digitised property sales, contracts and customer systems underpinning the company's revenue cycle.
- Built the infrastructure and multi-site connectivity the business ran on.
- Established governance, audit readiness and security controls including ITGC and ITAC, to a standard that withstood external scrutiny.

IT Director / IT Manager

2007 – 2015

Cairo Cotton Center, Cairo Dyeing Center, T&C, Green Hill — *Industrial, Construction & Real Estate*

- Directed technology across four companies spanning three industries, covering enterprise systems, infrastructure, databases, security and technical operations.
- Owned availability, backup and recovery, access control and end-user services across multiple sites and materially different operating models.

Oracle & SAP Implementation Consultant

2004 – 2007

ECTC — *Trading & Construction*

- Delivered full-cycle Oracle and SAP implementations: requirements, configuration, data migration, testing, training and rollout.

ERP Application Support Specialist

2001 – 2004

MISR 2000 — *Microsoft Gold Partner*

- ERP application support, customisation and client deployments across a Microsoft Gold Partner's customer base.

TECHNOLOGY

Artificial intelligence	Retrieval-augmented generation, LLM agent orchestration and routing, vector search and embeddings, natural-language querying of operational data, recommender systems, prompt engineering, model selection and evaluation; LangChain, OpenAI, Gemini, LLaMA, ChromaDB, TensorFlow/Keras, scikit-learn, BERT, LSTM, CNNs
Enterprise systems	Microsoft Dynamics AX, SAP, Oracle ERP, custom-built ERP, retail POS, Power BI, business intelligence and executive reporting
Data & databases	Oracle Database, Microsoft SQL Server, MySQL, MongoDB, ChromaDB, data modelling, ETL pipelines, data quality and governance
Platforms & infrastructure	Windows Server, Active Directory, Microsoft Exchange, Microsoft 365, virtualisation, cloud and VPS hosting, networking, backup and disaster recovery
Engineering & delivery	Python, C#/.NET, SQL, Flask, Docker, CI/CD pipelines, Git

EDUCATION

PhD, Software Engineering — Thesis submitted
Cairo University, Faculty of Graduate Studies for Statistical Research
Thesis: *Harnessing Large Language Models for Document Retrieval QA: A Cross-Domain Performance Comparison*. Defence expected January 2027.
Supervisors: Prof. Mervat Gheith and Dr. Tarek Ali.

Master, Software Engineering — 2019 – 2021
Cairo University, Faculty of Graduate Studies for Statistical Research
Thesis: *An Enhanced Approach for Non-Parametric Machine Learning Classifiers* — KMKNN, cutting classification time by at least 25% with no loss of accuracy.
Supervisors: Dr. Ammar Mohammed and Dr. Abdelmonem Helmy.

Postgraduate Diploma, Software Engineering
Cairo University

Postgraduate Diploma, Computer Science
Cairo University

BSc, Information Technology
Cairo Higher Academy