



## Adel Eddin

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### Professional Summary

Visionary Technology Leader and Enterprise Architect with 30 + years of experience delivering large-scale, mission-critical solutions across healthcare, retail, banking, manufacturing, and telecommunications.

Expert in cloud transformation, data architecture, CTI, AI/ML, robotics, and full-stack application design.

Proven ability to translate strategic goals into actionable technology roadmaps, lead global teams, and align architecture with business outcomes.

Extensive hands-on background in .NET, Java, Python, SQL Server, Oracle, Azure, AWS, Genesys CTI, NICE CXone, ServiceNow, Power BI, and DevOps pipelines.

Strong record of improving uptime, scalability, and compliance in regulated industries (HIPAA, PCI DSS, FDA, SOX).

### Core Competencies

- Enterprise & Solution Architecture (TOGAF, SOA, Microservices, Event Driven)
- Cloud Platforms (Azure 15 yrs | AWS 20 yrs | Hybrid Multi-Cloud Design)
- AI & Data Science (Predictive Analytics, NLP/NLU, Computer Vision, Model Governance)
- Security Architecture (HSM/KMS, Zero Trust, SSO/SAML, Encryption Lifecycle)
- CTI / Contact Center (Genesys Cloud & Engage, NICE CXone, Cisco UCCE, Avaya)
- Database Engineering (SQL Server, Oracle, PostgreSQL, Cosmos DB, MongoDB)
- ERP / CRM / MES (Dynamics 365, Salesforce, SAP SuccessFactors, Workday, Rockwell PharmaSuite)
- DevOps & Automation (Azure DevOps, GitHub Actions, CI/CD, IaC Terraform)
- Robotics / IoT / SCADA (Edge Telemetry, Predictive Maintenance, Automation Pipelines)
- Leadership & Governance (Strategy Roadmaps, Budgeting, Cross-Functional Teams)

### Top Professional Experience

#### Med & Pharma Electronic Technology Services | Charlotte, NC

##### Enterprise Architect / CTO / CIO / Product Owner *(Aug 2018 – Present)*

- Directed enterprise architecture and multi-cloud modernization; unified Azure + AWS environments with encrypted HSM/KMS key management.
- Designed robotics-driven warehouse automation integrated with CRM / POS / Power BI, improving order-fulfillment latency by 40 %.

- Implemented SCADA/HMI dashboards and AI anomaly detection for telemetry data — reducing unplanned downtime by 30 %.
- Architected secure dataflows between Dynamics 365 and MES systems ensuring validated GxP compliance.
- Introduced AI governance and model lifecycle management standards company-wide.
- Oversaw Power Apps / SharePoint / ServiceNow implementations for version control and release tracking.
- Budgeted and managed RFPs for IT projects while coordinating onshore/offshore teams.

**Key Technologies:** Azure, AWS, Dynamics 365, Power BI, Power Apps, SCADA, Python, C#, SQL Server, ServiceNow, Utimaco, Thales CipherTrust, Entrust KeyControl.

## **Emporos Systems Corporation | Charlotte, NC**

**Chief Technology Officer / Enterprise Architect** *(Jul 2014 – Aug 2018)*

- Led POS modernization from Access/VB6 to .NET Core & Java microservices; boosted throughput by 50 %.
- Integrated robotics and Power BI dashboards for pharmacy warehouses to enable real-time inventory visibility.
- Migrated company CRM to Microsoft Dynamics 365 and customized with Power Automate and C#.
- Deployed ServiceNow CMDB for asset tracking and release governance.
- Championed DevOps adoption (Azure DevOps CI/CD) reducing release cycle time by 60 %.
- Collaborated with clients and vendors to integrate payment processors, gateways, and banks with POS systems.

**Key Technologies:** C#, .NET Core, Java EE, Power BI, Power Automate, Azure DevOps, SQL Server, ServiceNow, Dynamics 365.

## **Advance Database Research & Development Corp. | Charlotte, NC**

**Enterprise Architect / CIO** *(Jun 2007 – Mar 2012)*

- Built low-latency trading platform leveraging AI algorithms for predictive risk and market analysis.
- Implemented enterprise-wide cryptography infrastructure with HSM & KMS for digital signing and database encryption.
- Directed Big Data initiatives to analyze real-time financial market streams and automate decision-making.
- Delivered redundant disaster-recovery solutions meeting regulatory requirements (SOX / PCI / HIPAA).

**Key Technologies:** Java, C#, Oracle, SQL Server, HSM, AI Modeling, Low-Latency Trading Systems.

## Prior Roles (Condensed Summary)

### ABB Group – Solution Architect, Embedded Systems

- Developed IoT controllers exposing embedded functions to external systems.

### Wachovia Bank – Solution Architect, DR and Continuity

- Designed DR strategy for critical banking applications.

### Health Solutions Plus – Director of Development

- Led EHR system development and data analytics modernization.

### Unisys Corp – Enterprise Architect, Document Management Systems

- Integrated Infolmage with FileNet / Documentum; implemented machine learning for classification.

### V3 Systems – Senior Architect, RFID Solutions

- Developed IoT/RFID inventory tracking applications.

### Bank of America – Enterprise Engineer

- Oracle/SQL Server data-warehouse integration for CSA division.

### Microsoft Corp – Software Engineer

- Early contributor to .NET framework and XBase engine migration (FoxPro RUSHMORE to UNIX).

## Education & Certifications

**B.S. Computer Science**, University of North Carolina at Charlotte

**B.A. Economics & International Finance**, UNC Charlotte

**MBA Coursework**, Queens University (Completed 1997 – non-degree)

**Certifications:** TOGAF | MCSE | IBM Rational Tools | Six Sigma (GB) | RUP PM | Human Resources Mgmt (CPCC)

## Professional Affiliations

IEEE | ACM | Computer.org

## Technical Proficiencies

**Languages:** C#, C++, Java, Python, Swift, Kotlin, PHP, JavaScript, TypeScript

**Frameworks:** .NET Core, Spring Boot, Django, Flask, React, Angular, MAUI, WPF

**Databases:** SQL Server, Oracle, PostgreSQL, MySQL, Cosmos DB, MongoDB, Teradata

**Cloud & DevOps:** Azure, AWS, Terraform, Docker, Kubernetes, Jenkins, GitHub Actions

**Security:** SSO, SAML, OAuth2, Zero Trust, HSM/KMS (Entrust, Thales, Utimaco)

**Analytics & AI:** Power BI, SAS, TensorFlow, Azure ML, SageMaker

**CTI Platforms:** Genesys Cloud / Engage, NICE CXone, Cisco UCCE, Avaya Experience Platform

**Tools:** Jira, ServiceNow, Visual Studio, Eclipse, Xcode, Android Studio



## Technology Experience Narratives

### Workday Experience

Over the course of my career, I have developed deep, hands-on expertise with Workday's full suite of HCM, Payroll, and Financial Management modules, working across multiple industries to implement, optimize, and support large-scale deployments. My experience spans end-to-end Workday project lifecycles—requirements gathering, business-process design, configuration, testing, go-live, and post-implementation support. I have led multiphase Workday rollouts integrating complex structures, compensation frameworks, and regulatory compliance for several enterprise clients including **Med & Pharma Technology Services** and **Emporos Systems Corp.**

I configured Absence Management, Time Tracking, Talent & Performance, Recruiting, and Learning modules; designed custom business processes, security groups, and calculated fields; built dashboards and analytics for HR leadership; and integrated Workday with third-party ERP and payroll systems using Studio, EIB, and Core Connectors. I also established governance frameworks and change-management programs that maintained alignment with evolving business strategies.

### HSM / KMS Experience

I have extensive experience with Hardware Security Modules and Key Management Systems—Entrust KeyControl, Thales CipherTrust and Luna, Utimaco SecurityServer—covering full cryptographic lifecycles from generation and rotation to archival and decommissioning. At **Med & Pharma Technology Services** and **Emporos Systems Corp.**, I integrated HSM-backed encryption for payment gateways, TLS/SSL certificate storage, database column-level encryption for HIPAA data, and PKI digital-signature services.

I automated lifecycle operations via PowerShell and Python, implemented centralized key management across AWS and Azure, and designed disaster-recovery and audit processes meeting FIPS 140-3 and PCI DSS requirements.

### Messaging Architect

Over 30 years I have designed and led enterprise-scale messaging architectures across Azure, AWS, and hybrid on-prem environments for healthcare, retail, finance, and manufacturing. Using Kafka, RabbitMQ, ActiveMQ, Amazon SQS, and NATS, I built high-throughput, fault-tolerant publish/subscribe and event-streaming systems supporting POS, CRM, ERP, and warehouse telemetry.

At **Med & Pharma Technology Services**, I migrated legacy point-to-point interfaces to event-driven microservices, implemented multi-AZ Kafka clusters with MirrorMaker replication, TLS/mTLS security, and OpenTelemetry monitoring via Azure Monitor and CloudWatch. These efforts eliminated 80 % of FTP-based transfers and achieved 99.99 % uptime for mission-critical integrations.

### Oracle Supply Chain

For 17 years I have architected and optimized Oracle Supply Chain Management solutions—E-Business Suite and Oracle SCM Cloud—for healthcare, finance, retail, and industrial clients.

At **Med & Pharma Technology Services**, I integrated Order Management, Inventory, Procurement, Manufacturing, Transportation Management, and WMS modules using Oracle Integration Cloud and REST APIs, cutting order-to-cash cycles by 30 %.

I implemented hybrid-cloud architectures on OCI and AWS, enforced security (VPD, TDE, OCI Vault), and automated regression testing and zero-downtime upgrades.

These deployments consistently delivered 99.9 % availability and measurable ROI improvements in supply-chain velocity.

### **Python Development**

With 21 years of professional Python work, I've delivered full-stack, containerized services in Flask, Django, and FastAPI running on EKS and AKS.

I architected ETL and streaming pipelines via Airflow and Kafka, processing 5 TB per day and 200 K events/sec.

At **Med & Pharma Technology Services**, I optimized serialization using orjson, introduced uvloop for low-latency scheduling, and hardened APIs with OAuth2/JWT security.

Automation scripts handle CI/CD (Jenkins, GitHub Actions), testing (pytest 95 % coverage), and observability (Prometheus/Grafana).

These platforms now support real-time analytics and sub-100 ms response for POS and delivery systems.

### **SAS Analytics**

At **Med & Pharma Technology Services**, I engineered SAS 9 → SAS Viya migrations to Azure and AWS, modernizing Base SAS, Macro, EG, and VA workloads for multi-terabyte healthcare analytics.

I optimized PROC SQL joins and CAS jobs, reducing batch runtimes from 4 h to 15 min, automated ETL orchestration through Azure Data Factory and Step Functions, and integrated CI/CD with Jenkins and Bitbucket.

These efforts yielded 40 % faster pipelines and hardened data-security compliance via DataFlux and role-based Viya controls.

### **Linux / C / C++**

Over three decades designing real-time Linux desktop and embedded applications in C/C++, including POS terminals, SCADA dashboards, and warehouse telemetry.

At **Med & Pharma Technology Services** I migrated Motif/X11 UI code to Qt on Wayland—reducing startup time 60 % and memory 30 %.

I implemented lock-free queues, shared-memory IPC, and secure-coding standards (CERT C/C++), achieving deterministic <1 ms latency for critical telemetry.

All code is profiled with Valgrind and perf and deployed through Dockerized CI/CD pipelines.

### **SAP SuccessFactors / HCM**

Led end-to-end SAP SuccessFactors deployments for 8 000 + employees at **Med & Pharma Technology Services** and partner firms.

Implemented Employee Central, Recruiting, Onboarding, Performance & Goals, Compensation, Succession, and Learning; configured RBP security, OData integrations, and Azure AD provisioning.

Built Kafka-driven real-time event bridges to data lakes and automated test suites with Provar, cutting MTTR 40 %.

Delivered 99.8 % uptime and continuous compliance with ISO and SOC audits.

### **CTI / Genesys Experience**

Over 33 years building and operating Genesys Cloud (PureCloud) and on-prem Genesys Engage platforms across healthcare, finance, and retail.

At **Discover Financial Services** and later **Med & Pharma Technology Services**, I designed omnichannel routing, IVR Architect flows, SIP infrastructure, and speech-analytics integrations.

I scripted automated deployments with Ansible and Jenkins, implemented proactive health checks, CloudWatch/Azure Monitor alerts, and achieved sub-1 % SLA breaches across millions of calls annually.

### **Full Stack Data Architecture**

As Chief Data Architect at **Med & Pharma Technology Services**, I unified 5 TB/day batch and 200 K events/sec streams from POS, IoT, and ERP sources into Azure and AWS lakehouses using Kafka, Synapse, Redshift, and dbt.

Implemented Delta Lake/Hudi for ACID storage, Purview/Macie for governance, Terraform for IaC, and OpenTelemetry for monitoring.

This architecture reduced ETL failures by 70 % and cut data delivery latency from hours to minutes.

### **Cloud Security Architecture**

Led security architecture for multicloud environments (Azure, AWS, Tencent) supporting POS and payment applications.

Implemented zero-trust IAM, envelope encryption (Key Vault/KMS), and cross-cloud VPC peering.

At **Med & Pharma Technology Services**, I built threat models (STRIDE), centralized logging via CloudWatch and Azure Monitor, and automated Terraform compliance scans—achieving 99.9 % uptime and auditable security posture.

### **Product Architecture**

For 33 years I have guided product strategy and technical direction across POS, CRM, and warehouse management solutions.

At **Med & Pharma Technology Services** I architected microservice-based order processing handling 10 000 + concurrent users and 2 million transactions per day using Azure Service Bus and Kafka.

I led cross-functional teams, mentored developers, standardized CI/CD, and introduced story-mapping and Kanban in Jira to boost delivery predictability by 25 %.

### **Teamcenter PLM**

Architected enterprise Teamcenter implementations for medical device and pharma manufacturing clients.

Designed custom item types, BOM structures, and integrations with SAP S/4HANA via TCI. Automated regression testing with Teamcenter TAF and orchestrated Ansible/Jenkins deployments achieving zero-downtime upgrades and 30 % faster BOM retrieval.

### **iOS & Android Development**

At **Med & Pharma Technology Services**, I built cross-platform mobile apps for credit-card payments, POS, CRM, and warehouse operations serving 3 000 + daily users.

Migrated legacy Objective-C/Java code to Swift 5.6 and Kotlin MVVM frameworks; introduced async/await and Coroutines, cutting transaction latency 85 %.

Implemented CI/CD with Fastlane and Jenkins and automated UI testing (AWS Device Farm / Firebase Test Lab) with 93 % regression coverage.

Biometric auth, push notifications, ARKit/ARCore visualization, and App Store/Play rollouts increased transaction volume 12 % week-over-week.

### **Product Ownership**

As Product Owner at **Med & Pharma Technology Services**, I translated client requirements into roadmaps and backlogs, defined MVPs, prioritized features, and oversaw design and delivery cycles for the organization's software suite.

Collaborated with stakeholders to balance scope and market fit while maintaining customer satisfaction and profitability.

### **Artificial Intelligence**

My AI journey began with a college senior project that optimized cell-tower handoffs for mobile carriers—later adopted by providers to improve call quality.

At **Med & Pharma Technology Services**, I built predictive models for pharmaceutical inventory forecasting, reducing waste and avoiding shortages.

Across industries, I have applied AI for fraud detection, demand forecasting, and customer segmentation, demonstrating tangible business impact.

### **Java Engineering**

Over 20 years of enterprise Java development—from Sun Microsystems Alpha JDK programs to Spring Boot microservices.

At **MAPETS USA** and **Emporos Systems Corp**, I implemented secure REST APIs with OAuth2/JWT, JavaFX desktop clients, and WebFlux reactive services.

At **Discover Financial**, I built a Java Swing notification client integrated with Genesys EAX routing events.

Consistent focus on Test-First development and IoC frameworks (Spring, Guice, Unity) ensures maintainable and scalable codebases.

### **Cybersecurity**

Results-driven cybersecurity leader with experience in PCI DSS, HIPAA, and firmware security. Implemented fraud-prevention controls, penetration testing, and vulnerability analysis for payment and healthcare systems.

Integrated TPMs and secure-boot mechanisms into embedded devices and hardened software through static analysis and secure coding standards.

At **Med & Pharma Technology Services**, I combined offensive testing with defensive architecture to mitigate supply-chain and hardware threats.

### **Database Engineering**

Three decades of RDBMS architecture and administration experience (MS SQL Server, Oracle, MySQL, PostgreSQL).

At **MAPETS USA**, I modeled and implemented data warehouses and ETL pipelines using SSIS and SQL Server BI tools.

At **Emporos**, migrated Access applications to SQL Server; at **Discover**, optimized Genesys CTI SQL repositories; and at **Bank of America**, integrated Oracle and DB2 for CSA tracking.

I adhere to naming conventions, indexing strategy, and security best practices, ensuring integrity and performance across mission-critical databases.

### **.NET Development**

As a Microsoft Alpha program participant since 1996, I contributed to early .NET framework testing and wrote widely read articles on C# and EMC Centera integration.

At **MAPETS USA**, I built REST APIs and UWP/Xamarin/WPF clients hosted in Azure; introduced IoC (StructureMap, Unity) for Test-First development; and implemented microservices for POS transactions.

At **Emporos**, I migrated legacy POS to WPF and ASP.NET Core; at **Discover**, developed Genesys SDK toaster clients in C#.

These projects demonstrate decades-long mastery of the .NET ecosystem from desktop to cloud.