ASMAA ARFA

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DATABASE ENGINEER

Experienced Database Engineer with 9 years of expertise in designing and implementing reliable database solutions for banking systems using Sybase and SQL Server. Skilled in data modeling, complex query optimization, T-SQL, and SQL query performance tuning. Proficient in ETL processes using SSIS and BCP, with hands-on experience in CI/CD pipelines. Experienced in managing complex database projects, ensuring financial data integrity, and optimizing high-performance transactional systems. Strong problem-solving skills, with a proven track record of collaborating in cross-functional teams and fostering teamwork to achieve successful project outcomes.

● Database Design ● Data Modeling ● Data Migration ● Query Optimization ● ETL Process
● Performance Tuning ● Big Data Processing ● Data Integration ● Data Analytics Integration

Languages: SQL, T-SQL, Sybase, java
Databases: Sybase, SQL, HBase, PostgreSQL, Hibernate
Design Patterns: Singleton, Factory Pattern
Tools: SQL Server, DBArtisan, ETL, IntelliJ IDEA, VS, GitHub, Postman, *SSIS, BCP, CI/CD*
Platforms: MacOS, Windows, AWS, Azure
Big Data: Hadoop, Hive, Java spark, scoop, pig

PROFESSIONAL EXPERIENCE

*CAREER NOTE: Completed on-campus studies and currently taking distance education courses to complete a **Master's Degree in Computer Science** (Available for full-time, W-2 employment).*

Kuwait Finance House [KFH], Kuwait, Kuwait ● 12/2020 – 10/2024
A financial institution.

Core Systems Specialist
Manage core banking applications, ensuring system stability, data integrity, and alignment with banking regulations.

- Developed in-house enhancements for core banking applications using Sybase and SQL.
- Integrated third-party services into the Kuwait Finance House core banking platform using custom API procedures, ETL, and data integration, improving connectivity with payment gateways, financial reporting, and customer data synchronization.
- Migrated core banking system data between Kuwait Finance House and Ahli United Bank using SSIS for data mapping and hash-based validation, achieving 99.9% data accuracy and ensuring a smooth transition with minimal disruptions.
- Optimized the Know Your Customer (KYC) process for the KFH Youth Banking Application by restructuring the database schema, reducing redundant fields by 60%, and enhancing data integrity.
- Enhanced overall application performance by 25% by redesigning legacy functions and APIs, restructuring tables, and optimizing indexes.
- Designed a high-availability SMS service for real-time transaction alerts by creating a parallel services architecture with main and child components, improving service performance and reliability.
- Implemented VAT service integration for Kuwait Finance House using stored procedures, triggers, and user-defined functions, automating tax calculations.
- Tested and deployed vendor patches to the banking system in the production environment, reducing reported live issues by 98%, thereby maintaining system stability and ensuring continuous uptime for critical banking functions.

Technologies Used: Sybase, SQL, ETL, SSIS, pipelines CI/CD, Java

ITS, Cairo, Egypt ● 03/2016 – 11/2020
A financial solutions company.

Senior software developer
Developed database-based services for core applications.

- Designed and implemented new system features to meet evolving requirements using Sybase and SQL Server, successfully delivering updates that enhanced functionality and supported business growth.
- Conducted both unit testing and User Acceptance Testing (UAT) for core banking systems to ensure high-quality standards, reducing production bugs by 30%.
- Provided ongoing support for live systems by implementing enhancements and fixing bugs on the core banking platform, improving application stability and user satisfaction through prompt issue resolution.
- Migrated database schemas from Sybase to SQL and PL/SQL, ensuring compatibility in table structures, data types, and constraints, which enabled a smoother transition and consistent data handling across platforms.
- Rewrote stored procedures, triggers, and views from Sybase to SQL Server, aligning them with SQL Server syntax and functionality to maintain performance and operational consistency post-migration.
- Developed and maintained an ETL tool using the Bulk Copy Program (BCP) to facilitate data migration between file systems and databases or between different databases.

Technologies Used: *Sybase, SQL, ETL, Java, Gupta, SSIS, pipelines CI/CD*

YOUXEL, Cairo, Egypt • 11/2015 – 02/2016
Software mini corporate for developing web services and mobile apps.
Software Developer
develop backend web applications.
- Developed and maintained RESTful APIs and backend services for a peer-to-peer recognition platform using .NET MVC and web services, ensuring reliable performance and smooth integration with frontend components.
- Designed and optimized database schemas and queries for the administration portal to support scalable management of application features, improving data handling efficiency and system performance.
- Contributed to backend development and bug fixing for a mobile application by resolving integration issues, enhancing the application's reliability and user experience.

Technologies Used: *.Net MVC, SQL*

SIMPLERAPPS SOFTWARE SOLUTIONS LTD, Cairo, Egypt • 07/2015 – 10/2015
A software mini corporate specialized in developing web-based applications for medical systems.
Software developer
build web-based applications
- Developed and maintained RESTful APIs and backend services to support web applications using MVC architecture, providing reliable backend functionality and support for frontend integration.
- Designed and implemented database integration to optimize performance, ensuring efficient data access.

Technologies Used: *Dot Net MVC, SQL, Azure*

ACADEMIC PROJECTS

Maharishi International University (2024)
- **Stock streaming:** Developed a big data analytics solution using Apache Spark for data processing, Hive for data warehousing, and HBase for real-time data storage. Visualized insights with Tableau to provide an interactive interface for analyzing large datasets. Focused on building a scalable and efficient pipeline for big data analysis.

- **CloudGuard:** Developed a cloud-based authentication system using React for the frontend, Node.js for the backend, and DynamoDB for data storage. Integrated Amazon S3 for storing profile images and CloudFront for content delivery. Implemented serverless architecture with AWS Lambda to manage user profile.

EDUCATION

Master of Science in Computer Science
(In progress via distance education; expected completion 12/2026)
Maharishi International University, Fairfield, Iowa

Key Courses: Algorithm, Big data, Cloud Computing, Enterprise Architecture, Web application programming

Bachelor of Science in Scientific computing
Ain Shams University, Cairo, Cairo (06/2015)

CERTIFICATIONS
Certified business analyst. [level 1]