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EDUCATION

Beni Suef, Egypt **Beni Suef University** **Sep 2018 – July 2022**

- **Major:** B.Sc. in Computer Science, Faculty of Computers & Artificial Intelligence.
- **GPA:** 3.30.
- **Graduation Project:** [ASAR](#) (Arabic Manuscript Analysis and Recognition system). An intelligent system for digitizing historical Arabic manuscripts.
 - Implemented word spotting and pattern recognition algorithms to convert complex Arabic text images into digital text.
 - Created a [web application](#) using Flask framework to provide a user-friendly interface for accessing ASAR system.
 - Led the team in the research and development of ASAR system.

PROFESSIONAL WORK EXPERIENCE

Software Engineer **SilverKey Technologies** **Jul 2021 – Present**

- Taly BNPL (Buy Now Pay Later)
 - Initiated the project architecture by applying the best practices in .NET Core with backend for frontend (BFF) pattern.
 - Developed and designed web portal features including plan management, multi-tenancy, onboarding workflow, maker/checker review, action logs, auto-approval, in-system notifications, background services, and others.
 - Implemented secure and resilient APIs (Internal & Integration) for onboarding and repayment of external merchant.
 - Design the system to be multi-tenant enabling banks serve their nested corporate, aggregators, and merchants.
 - Constructed both feature-level and data scope authorization within the system using Keycloak Identity provider.
 - Document the database design and integration API Guide.
- Taly Meeza Wallet
 - Developed a fully REST APIs based on service-oriented architecture (SOA) for the wallet mobile app, in addition to the inbound and outbound services to be a **standalone integration platform**.
 - Implemented the SOAP protocol of **Meeza** digital network to handle wallet processing in Egypt, achieving certification from [Egyptian Bank Company \(EBC\)](#).
 - Reduced database workload by implementing distributed caching, leading to improved overall performance.
 - Ensured regulatory compliance from the [Central Bank of Egypt \(CBE\)](#) by meeting their security, payment standards and requirements.
 - Write unit tests using xUnit to ensure the business functionality of developed APIs and mock test for inbound service.
- Taly Installment
 - Developed file mapping and processing functionality to synchronize Bank installment plans and POS transactions.
 - Implemented SFTP and FTPS connections export and importing files to/from third parties.
 - Created a file tracking feature with auditing capabilities to log all events associated with generated files.
- Education Quality Monitoring System (QMS)
 - Delivered the [next phase](#) to the Ministry of Education and Technical Education (**MoETE**) in partnership with [GIZ](#).
 - Developed many features in the web portal including school forums, assessment and statistics reports, and surveys.
 - Implemented the backend REST APIs for school and administration tablets.
 - Documented the system user manual and system architecture for clarity and user experience.
- [Labour Market Access Project](#)
 - Created Complex queries for reporting dashboard for [LMAP Admin](#) portal to serve many employment centers and job seekers in Egypt with partnership with [GIZ](#).
 - Executed data migration of the database from the legacy software schema to fit the new software schema.
 - Developed other features like sharing knowledge base, complaints, and company subscriptions.
 - Implemented global role authorization and user specific authorization to be manageable in admin portal.

Tech Stack: .NET Core 8, OAuth2 with Keycloak, VueJs, Blazor WASM & Server Side, LLBLGen ORM, CQRS, xUnit, SOAP gRPC, SQL Server, PostgreSQL, Docker, Temporal io, Microsoft Orleans, Open Telemetry, and Elastic Stack (ELK).

OPEN SOURCE CONTRIBUTIONS

EMVQR.NET

- Build and maintain [Nuget Package](#) for generating and parsing QR Codes for digital payments in .NET based on the [EMV\(R\) QR Code Specification Standards](#).
- Repo Link: <https://github.com/aboelkassem/EMVQR.NET>

SurveyJS

- Add Arabic Language Support on both libraries [survey-creator](#) and [survey-analytics](#).

PERSONAL PROJECTS

Listify

<https://github.com/aboelkassem/Listify>

Aug 2020 – Oct 2020

- Build a real-time web application enabling users to share their preferred music/videos with an online community.
- Developed streaming features and a currency system for an interactive platform experience.
- Integrated Youtube API and Spotify API to facilitate the request and playback songs and playlists within user rooms.
- Added payment integration with PayPal gateway for financial transactions and profanity filter with PurgoMalum API.
- Utilized the IdentityServer4 framework to enable single sign-on (SSO) and diverse user authentication methods.
- Tools used: ASP.NET Core 3.1, Angular 10, SignalR, EF Core, IdentityServer4, SQL Server, AutoMapper.

SKILLS

- **Programming Language** C#, Go Lang, Python, TypeScript, JavaScript, HTML, CSS
- **Back-End frameworks:** ASP.NET Core, Flask, SignalR.
- **Front-End frameworks:** Vue, Angular, Blazor Web Assembly and Server Side, Bootstrap, jQuery.
- **Databases:** Microsoft SQL Server, PostgreSQL, MySQL.
- **ORMs:** LLBLGen, Entity Framework Core.
- **Technologies:** Docker, Elastic Search (ELK stack), Open Telemetry with Jaeger, and OAuth2 with Keycloak and Identity Server.
- **Unit Testing:** xUnit.
- **General Concepts:** Algorithms, Data Structure, Distributed Systems. Microservices, Service Oriented Architecture (SOA), CQRS Pattern, Solid Principles, Design Patterns, Database and System Design, Web Services, OWASP Web Security, Linux, Networking, and Agile Methodology.
- **Service Communication Protocols:** SOAP, gRPC, and RESTful APIs.
- **Other Skills:** Good technical writing and communication skills.

LANGUAGES

- Arabic (Native)
- English (Excellent)