

Nagi Yacoub

Software Architect · Senior Full-Stack Engineer

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Summary

Software architect and senior full-stack engineer with 20+ years designing, building, and modernizing complex web applications across healthcare, fintech, and marketing technology. Specialist in transforming legacy systems into modern, high-performance web platforms — from the front end to the database. Proven record of major performance gains, six-figure cost savings, and zero-downtime migrations for hundreds of clients. Driven by a genuine passion for solving hard problems, simplifying complex interfaces, and improving performance.

Core Skills

Languages	C# · TypeScript · JavaScript · SQL
Back End	.NET / .NET Core · ASP.NET · Node.js · NestJS · REST APIs · WebSockets
Front End	Angular · HTML5 / CSS3 / SASS · AG Grid · Syncfusion · KendoUI
Databases	SQL Server · Oracle · MySQL · MongoDB
Tools & Practices	Git · Docker · Azure · Agile / Scrum

Experience

System Architect

Sep 2023 – Present

VeritableSoft Innovations · North York, ON

- Architecting a financial platform that lets investors and directors manage employee stock-based compensation, working directly with stakeholders to shape requirements.
- Rebuilding the front end into a cleaner, more modern, and more intuitive user experience.
- Developing new capabilities to scale the platform for the needs of larger enterprises.

Principal Software Developer / Consultant

Apr 2017 – Jan 2023

MedicaSoft · Vaughan, ON

Picture Archiving & Communication System (PACS)

- Partnered with doctors, nurses, technologists, radiologists, and reception staff to capture the full business requirements for a clinical imaging system.
- Re-architected a legacy PACS into a fully web-based application using Angular.
- Built extraction of patient data and images from DICOM, with an intuitive interface to browse studies, series, modalities, and images.
- Achieved major performance gains loading and displaying thousands of medical images using HTTP/2, image compression, and virtual loading.
- Implemented REST APIs for the entire PACS platform with Node.js and .NET, plus a full authentication and authorization security layer.
- Integrated the OHIF viewer for measurements, annotations, and segmentation, and built a chat system for communication and document sharing.
- Delivered a configuration-driven reporting system that accommodates any client report with no code changes.

Principal Software Developer

Jun 2006 – Mar 2017

Epsilon Interactive (NYSE: ADS) · Toronto, ON

Inbound System

- Led a team of 3 developers to replace a 10-year-old inbound system, cutting costs by ~\$100,000 and improving performance fivefold.
- Migrated hundreds of clients with zero service interruption, and introduced spam/virus detection with 99% accuracy and near real-time message handling.

DREAMmail

- Managed a team of 2–3 developers and contributed to hiring; optimized UI performance with virtual loading (SlickGrid).
- Boosted backend performance by refactoring C# and moving database logic into efficient stored procedures.
- Designed and delivered full time-zone and multi-language support across both the UI and the backend.

Back Office

- Rebuilt the legacy Back Office application to resolve performance and usability issues — delivered in half the time of the previous system, with no backend or API changes — using JavaScript and ExtJS (grids, tabs, tree-grids, dialogs).

Featured Project

Nexevo — Multi-Tenant SaaS Platform for Regulated Industries

Independent Project

.NET 10 · SQL Server · Vanilla JS · Docker · Cloudflare · PHIPA-aware

- Solo-designed and built a multi-tenant platform for healthcare and other regulated industries — authentication, role-based access, scheduling, and notifications — with per-tenant color theming, light/dark mode, and a multilingual UI (English, French, Chinese).
- Created a stored-procedure-first backend with a custom code generator that produces the REST API and data layer from the database schema and enforces tenant-isolation rules at build time.
- Built a reporting engine driven by a single JSON schema — the same field definition renders the data-entry form and merges into a Word template to produce a finished PDF, so adding a new report type needs no code.
- Built a framework-free JavaScript front end from scratch — a virtualized data grid, JSON-driven forms and dialogs, a scheduler, and reusable UI controls (dropdowns, switches, context menus) — deployable as a drop-in with no build step.
- Implemented correct time-zone and date handling across the entire app — every data grid and the scheduler — storing times in UTC and converting to each tenant's zone for display.
- Designed a defense-in-depth security model (server-side permission checks against live state, refresh-token revocation, CSP, rate limiting) suited to PHIPA-regulated health data.
- Deployed with Docker behind Cloudflare, with automated build-and-deploy on every push to the main branch.

Education

Bachelor of Engineering (B.Eng.) — Ain Shams University, Cairo