

Ahmed Sameh El-Sawalhy Full Stack Software Engineer

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🔗 sawalhy.github.io/portfolio

</> Skills

Languages: C#, JavaScript, TypeScript, Python

Backend: .NET, Node.js, Express, NextJS, NestJS, Zod, SQL, SQL Server, PostgreSQL, Prisma, Entity Framework, GraphQL, Redis, OAuth2, JWT

Frontend: React, Capacitor, Razor, Tailwind CSS, Bootstrap, Ant Design, WordPress, WooCommerce

Cloud & DevOps: Linux, AWS, Docker, Jenkins, Git, Airflow, Github Actions, Terraform, ECS/Fargate, RDS, S3, CloudFront

AI/LLM: LangChain, OpenAI API, LLM integration, text-to-SQL, prompt engineering, Claude Code, Cursor

Testing & QA: Jest, Selenium

{ } Professional Experience & Projects

Jan 2026 – Present	ACS, Senior Software Engineer Price-Intel Price intelligence platform tracking a product catalog across three Egyptian retailers, with an operator console for price history, run health, and failure triage. Scrape failures are classified by owner, separating bot walls from stale selectors, and each one stores a screenshot and the page HTML so triage points at the fetcher or the parsing rules without a rerun. Retailers run behind per-retailer queue workers (RabbitMQ), isolating rate-limiting on one site from the other two; the concurrency invariants that make this safe are documented in the repo.
Feb 2024 – Jan 2026	GISCON, Software Engineer • Maintained and enhanced 4+ critical web applications (.NET MVC, React) for Kuwait's Environment Public Authority (EPA) and the Egyptian Environmental Affairs Agency. Delivered UI/UX improvements, third-party API integrations, new feature deployments, performance optimizations, while navigating compliance/legal requirements, writing Clean-code and following coding standards and best practices and maintaining my own CI/CD pipeline. • Proposed and implemented Airflow health checks and failure alerts (heartbeat, task-fail) via Discord webhooks; eliminated silent DAG failures and cut time-to-detect from hours to minutes across license-expiry and integration pipelines. • Built an LLM-integrated air quality analytics chatbot on top of a large SQL Server dataset using Node.js/Express and an OpenAI API query layer, translating natural-language questions into reliable data requests and returning structured results with clear user-facing summaries.
Jun 2023	ACS, Software Engineer Worked on the backend of a family planning software system in partnership with Egypt's Ministry of Health. Implemented RESTful APIs and database queries. The platform supported the distribution and administration of multiple contraceptive types, used by ministry administrators, nurses, and doctors across Egypt.
Oct 2022 – Dec 2022	Valeo - GISACC, Software Engineering Intern
Jun 2022 – Sep 2022	Masarat Misr, Software Engineering Intern
Oct 2021 – Jan 2022	Valeo - GISACC, Software Engineering Intern

☆ Selected Projects

TimeSync - Multi-Timezone Tracker

Full-stack React/TypeScript + Express app that lets remote teams track 400+ timezones with real-time clocks, solar day/night timelines, JWT-secured user dashboards, and Neon/PostgreSQL persistence for a responsive, mobile-friendly experience.

Traffic Data Scraper

Built a traffic surrogate data pipeline on GCP to programmatically collect live travel-time estimates from public map services. Produced a historical dataset and a Tableau dashboard that provided coverage for non-instrumented corridors and informed traffic models and operational decisions.

Browsing Session Analyzer

Built a tool that analyzes rrweb session logs to detect user-friction and failure patterns (dead clicks, rage clicks, form issues, and runtime errors), then outputs prioritized findings and a readable session summary for faster product fixes.

Full-Stack Apartment Listing App

NestJS/Prisma/PostgreSQL with presigned S3 upload URLs, unit and integration testing; SSR Next.js frontend; Dockerized and deployed to AWS (ECS Fargate, RDS, CloudFront) via Terraform.

Dynamic Form Builder - Nested Conditional Logic

Fastify/TypeScript + React form builder with public submissions and arbitrarily nested AND/OR/NOT visibility rules, authored through a visual condition builder. The evaluator is a shared package run identically client- and server-side so visibility and validation can't diverge. Prisma/PostgreSQL, deployed on Render + Supabase.

🎓 Education

2023

B.Sc. Computer & Communications Engineering, Cairo University