

Mohamed Refaat Elfar

☎ +20 128 146 3754 | @ melfar391@gmail.com | 🐙 GitHub | 🔗 LinkedIn | 📍 6th of October, Giza, Egypt

OBJECTIVE

Senior Frontend Engineer with **3+** years building **complex web applications**. Specialized in **React / Next.js** ecosystems with a proven track record of **leading teams**, **architecting scalable solutions**, and **delivering business-critical features** in **automotive, fintech, and SaaS** domains.

TECHNICAL EXPERIENCE

Senior Frontend Engineer at Vxlabs

Oct 2025 — present

- Led a team of four developers by providing technical guidance and setting accurate estimates.
- Worked on **ThreatZ**, a CSMS with complex business logic in the automotive domain.
- Engineered multiple interactive visualization systems including knowledge graphs, threat modeling diagrams, and system architecture canvases using React Flow with advanced graph layout algorithms (Dagre, ELK), implementing complex validation logic for relationship constraints, auto-layout capabilities for hardware component modeling, automated deprecation warnings for legacy patterns and collaborative experience using websockets.
- Migrated the application to Next.js 16, leveraging Turbopack to improve the development environment and reduce CI/CD pipeline time by 30%.
- Leveraged Claude Code to accelerate development via multi-step plans and custom Claude skills.
- Single-handedly built the reporting feature to generate ISO/SAE 21434 compliance reports, producing dynamic reports from templates with in-browser preview and PDF export using jsPDF, including embedded graphs.
- Built an AI-powered assistant with streaming response capabilities to provide contextual recommendations and improve user experience.
- Initiated a 21-point application refactoring plan, grading each item by outcome, effort, and priority, and assigning them to the appropriate team members.
- Implemented end-to-end testing using Playwright to ensure reliability across critical user flows.
- Maintained our monorepo containing shared packages for types and utilities, supporting multiple UI applications.
- Technologies: Next.js, React, React Flow, D3, Dagre, ELK, WebSockets, Turborepo, jsPDF, Turbopack, modern-screenshot, playwright, vitest, Claude Code.

Frontend Software Engineer at Estithmar Almostaqbal (Faradah)

Apr 2025 — Oct 2025

- Working on the revamped architecture for an endowment management system.
- Provided an accurately estimated plan for App V1 containing 7 modules (membership management, financial transactions, voting system, announcements, sectors, company profiles, and admin dashboard) ensuring the successful execution of the business plan under tight time constraints.
- Built the Data Access Layer for GraphQL using Apollo Client and gql.tada, ensuring type safety and enabling automatic code generation and validation upon schema changes.
- Collaborated with DevOps engineers to implement a multi-environment CI/CD pipeline with automated deployment to GCP, reducing deployment time by 25%.
- Enhanced application performance through bundle optimization and smart caching strategies, implementing dynamic imports for heavy components, and Apollo Client query de-duplication.
- Designed and implemented a full authentication layer using iron-session with encrypted HTTP-only cookies, including secure token storage, rotation, and refresh logic integrated via Apollo Client observables, with shared utilities supporting both server and client components.
- Implemented real-time notifications using Firebase Cloud Messaging (FCM), including background push handling via Service Workers.
- Architected a secure payment flow using Moyasar, leveraging one-time tokens and server-side verification to prevent reuse and protect sensitive data.
- Technologies: Next.js, GraphQL, iron-session, firebase, react-aria, tailwind, recharts, react-pdf, pm2, github actions.

Frontend Software Engineer at Simple Pixel

Aug 2023 — Apr 2025

- Worked on a real-time dashboard app to manage the sport activities in Saudi Arabian universities.
- Built a composable, reusable table component using TanStack Table, supporting filtering, searching, sorting, and bulk row actions, with type-safe search parameters to prevent misuse.
- Built all types of charts using ApexCharts and Chartjs.
- Implemented Role-based Authorization with casl library.
- Increased the loading speed of many pages by 40% by using pre-fetching techniques.
- Made good use of caching mechanisms and debouncing techniques to decrease Backend requests.
- Worked on building a custom ui library for a super complex property management system called [Mabeet](#).
- Tested and documented every component in storybook supporting also RTL and i18n.
- Built a text editor using Lexical, supporting image uploads, formatting, colorization, alignment, and handling both Arabic and English with RTL support.
- Technologies: Nextjs (app & pages router), Zustand, react-hook-forms, Zod, react-query, TailwindCSS, MUI, shadcn, pusher, next-intl, apex-charts, chartjs, react-day-picker, storybook and vitest.

Part-time Frontend Developer at Amanleek

May 2023 — Aug 2023

- Maintain Amanleek's business portal and [website](#) to handle insurance for companies.
- Provide a full technical road-map and assign priorities to each goal by efficient communication with the tech lead.
- Spread awareness of best practices and future-proof architecture among the team.
- Collaborate on the new business portal built with Angular framework.
- Technologies: Nextjs, Angular, ngrx, ngx-translate, bootstrap, sass.

SKILLS

Concepts: Algorithms, Data Structures, SOLID, a11ty, i18n, React Server Components, Composition.

Languages: JavaScript, Typescript.

CSS flavors: tailwind, Sass, CSS modules, BEM naming convention, Bootstrap, MUI, CVA, shaden.

Frameworks: Next.js, React.

Testing: vitest, react-testing-library, playwright, storybook.

Others: Git, Linux (Debian), react-flow, turborepo, nuqs, eslint, biome, Redux toolkit, Zustand, tanstack query, next-intl, Zod, React-hook-forms, tanstack-table.

EDUCATION

Port Said University

Bachelor of Computer Engineering, GPA: 3.21

Sep 2018 – July 2023

SPOKEN LANGUAGES

Arabic: Native

English: Fluent "Certified from EF Set C1(71/100)"

German: limited working proficiency

French: limited working proficiency

VOLUNTEERING

Google Developers Student Club

Instructor, Technical Team Member

Sept 2021 – July 2022

- Explain complex data structures and algorithms in an easy way to students.
- Produced a [GitHub Repository](#) with the solutions of more than 150 coding problems.
- Made with my teammates a [playlist](#) that consisted of 12 videos that explain common data structures. I worked on videos from 9 to 12.