

Hamah Ahmed

Software Engineer

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SUMMARY

Software engineer with 3+ years in React, Next.js, and TypeScript, emphasizing architecture, performance, and state (Redux Toolkit, TanStack React Query) on web and React Native. Integrates REST and GraphQL with Node.js services; ships with tests, GitHub Actions, and AWS Amplify. Builds AI-driven product features. Frontend Engineering Instructor at ITI, delivering practical React training and project mentorship.

EXPERIENCE

Software Engineer — Langmate

Oct. 2025 – Present (part-time)

Cairo, Egypt

- Integrated LLM-based lexicon enrichment using structured prompts and schema-aligned JSON so entries (definitions, examples, IPA, variants, relations) scale without manual authoring.
- Shipped multimodal pronunciation assessment with Google Gemini (learner audio vs. target text and IPA), returning scores, confidence, and actionable feedback.
- Delivered AI-generated hero imagery for entries by pairing content understanding with an image-generation pipeline.
- Built a learner lexicon with instant save and async AI enrichment, using explicit workflow states for predictable UX.
- Modeled rich dictionary data in a shared layer: lemma, POS, multiword expressions, multi-sense definitions, examples, IPA, variants, and semantic relations.
- Built REST APIs and MongoDB/Mongoose persistence with pagination, filters, and indexes for responsive list/detail experiences.
- Shipped React Native (Expo) with TanStack React Query for infinite scroll, mutations, and cache updates, alongside a shared typed API package.
- Implemented language-profile onboarding (mother/target languages, preferred topics) and surfaced learner proficiency on the dashboard; exposed language analytics and app statistics for admin.

Frontend Engineering Instructor — Information Technology Institute (ITI)

Jul. 2025 – Present (part-time)

Mansoura, Egypt

- Delivered hands-on frontend training in HTML5, CSS3, JavaScript (ES6+), and React.js (OOP, responsive design, production-ready patterns); mentored 100+ trainees across MEARN and .NET tracks in 9-month, 4-month, and summer programs.
- Guided graduation projects on component architecture, clean code, and Agile delivery using Jira and Trello; conducted code reviews to raise frontend quality and problem-solving skills.

Software Engineer — Nursery Story

Jun. 2024 – Feb. 2026

Glasgow, UK (Remote)

- Reduced homepage load time from ~14 seconds to under one second by refactoring GraphQL data fetching, improving retention.
- Architected interactive onboarding to increase adoption and reduce friction for new nursery and parent users.
- Integrated Stripe for payments, improving reliability and processing efficiency.
- Built an accident report acknowledgment flow with React Native and Node.js, improving nursery-parent engagement.
- Cut mobile crash rates by about 40% across iOS and Android by diagnosing and fixing critical stability issues.
- Led a major frontend refresh of admin dashboard, booking calendar, and invoicing using React and React Native Web, improving usability and customer feedback.
- Implemented secure photo uploads for accident observations, improving reporting clarity and nursery workflows.
- Owned end-to-end iOS releases and production rollouts for new app versions, keeping updates stable for all users.

Software Engineer — Aleyada

May 2023 – May 2024 (Part-time)

Cairo, Egypt (Remote)

- Improved clinic onboarding accuracy with React Hook Form and Zod, reducing manual data-entry errors.
- Built analytics dashboards with Recharts for real-time visibility into clinic operations.
- Developed REST APIs with Node.js and Express for billing, invoices, and medical records.
- Delivered a micro-blogging area with Next.js and Directus so the business could publish updates without engineering bottlenecks.
- Added infinite scroll for large datasets and raised quality with Jest, Supertest, GitHub Actions, and AWS Amplify CI.

- Built a quote recommendation engine with OpenAI embeddings and Qdrant vector search to improve semantic relevance.
- Delivered scalable similarity search and redesigned the admin dashboard with React and Tailwind CSS for large content catalogs.
- Integrated Sentry for production monitoring and faster incident response.
- Implemented secure REST APIs with Node.js and Express, including content workflows with admin approval.

EDUCATION

Bachelor of Science in Mechatronics Engineering

2018 – 2023

Tanta University

Tanta, Egypt

- GPA 3.68/4.00 (90.23%); ranked 5th in class
- Graduation project: Medicine delivery and sterilization robot (A+)

Intensive Training Program in Full Stack Web Development (MEARN)

Nov. 2023 – Mar. 2024

Information Technology Institute (ITI)

Mansoura, Egypt

- Top 3 participant for technical proficiency
- Graduation project: Performance Management System (full-stack)

TECHNICAL SKILLS

Languages	TypeScript, JavaScript (ES6+)
Frontend	React.js, Next.js, React Native (Expo), HTML5, CSS3, Tailwind CSS, Bootstrap, shadcn UI, Recharts
State & forms	Redux Toolkit, TanStack React Query, React Hook Form, Zod
Backend	Node.js, Express.js, NestJS, Prisma
Databases	PostgreSQL, MongoDB, Mongoose, MySQL, Knex
APIs & integration	REST APIs, GraphQL, Stripe, Directus
DevOps & cloud	Git, GitHub Actions, AWS Amplify
Testing & quality	Jest, Supertest, Sentry
AI & search	OpenAI Embeddings, Google Gemini, Qdrant

HONORS, AWARDS & CERTIFICATES

Awards	3rd place, DEBI Robotics Challenge (national, 190+ teams), Ministry of Communications & Huawei Egypt
Honors	Ideal Student Award, Tanta University · Ranked 5th in Mechatronics Engineering
Certificates	IELTS · Full Stack Web Development, ITI

LANGUAGES

Arabic: Native

English: Professional

German: Beginner