

# Ali Haggag Software Engineer | MERN Stack

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 Qena, Egypt

 ali-haggag7

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 Portfolio

## SUMMARY

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Innovative Full-Stack Software Engineer (MERN) specializing in architecting scalable, real-time, and offline-first web applications. Adept at engineering complex systems using WebRTC for zero-latency streaming and Socket.io for live communication. Passionate about integrating AI capabilities (Google Gemini) and optimizing frontend performance through Optimistic UI to deliver seamless, high-engagement user experiences. Equipped with a strong foundation in Agile methodologies and cross-functional collaboration, ready to align technical architectures with broader team and business objectives.

## EDUCATION

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### B.Sc. in Computer Science & Artificial Intelligence

Oct 2023 – Jun 2027

*South Valley National University*

Qena, Egypt

- Cumulative GPA: 3.06 / 4.0
- Relevant Coursework: Data Structures & Algorithms, OOP, Database Systems, Software Engineering, Operating Systems.

## PROFESSIONAL EXPERIENCE

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### Backend Intern

Jul 2025 – Aug 2025

*Web masters* ↗

Cairo, Egypt (Remote)

- Engineered scalable backend architectures using **Node.js, Express, and MongoDB**, supporting robust data flow and improving overall system maintainability for the development team.
- Architected secure **RESTful APIs** for a high-traffic CMS (Blog) and a URL Shortener, implementing **JWT** authentication to ensure 100% secure end-to-end data access.
- Integrated **Firebase Realtime Database** to power instant messaging capabilities, decreasing data synchronization latency by **~40%** and delivering a seamless user experience.
- Optimized **MongoDB schemas** and enforced strict data validation rules utilizing **Joi**, accelerating query execution speed by **~30%** and eliminating database inconsistencies.

## PROJECTS

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### Flurry v2.0 - Social Super App ↗

Oct 2025 – Feb 2026

*Full Stack (MERN, Socket.io, WebRTC, AI)*

- Engineered an **Offline-first architecture** using **Service Workers** and optimized media delivery via **ImageKit**, reducing image payloads by up to **70%** and achieving a **90+ Lighthouse performance score**.
- Architected a **real-time messaging system** using **Socket.io** and **WebRTC**, achieving **near-zero latency (<50ms)** for seamless voice notes, video calls, and instant read receipts.
- Developed a scalable **Social Feed** and an **Instagram-like Stories System**, optimizing **MongoDB queries** to reduce data load times by **~40%** and supporting smooth **Infinite Scrolling**.

- Integrated **Google Gemini AI** for **smart group summaries** and implemented **Bi-directional Localization (RTL/LTR)**, enhancing accessibility and user engagement across different regions.

### Blog Application (CMS) ↗

*Full Stack (MERN, Cloudinary)*

Jul 2025 – Aug 2025

- Built a full-featured **Content Management System (CMS)** allowing users to manage posts with **rich text editing**, streamlining the content publication workflow.
- Implemented secure media uploads and on-the-fly optimization using **Cloudinary**, reducing image storage and bandwidth usage by **~60%**, coupled with robust **JWT authentication**.
- Designed scalable **RESTful APIs** following the **MVC architecture** to handle complex **CRUD operations**, improving overall maintainability and reducing API response times by **~25%**.

### Admin Dashboard API System ↗

*Backend (Node.js, Express, MongoDB)*

Jul 2025 – Jul 2025

- Architected a scalable **RESTful API** for user and record management, implementing **MVC Architecture** to ensure clean and maintainable code bases.
- Secured admin endpoints using **JWT Authentication** and enforced strict data validation with **Joi middleware**, blocking **100%** of invalid data payloads.
- Optimized database performance utilizing **MongoDB Aggregation pipelines** for complex data reporting, accelerating query execution speed by **~35%**.
- Implemented centralized **Error Handling** and documented API endpoints, reducing frontend-backend integration time by **~40%**.

## SKILLS

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### Languages

JavaScript (ES6+), TypeScript, C++, Python (Basics)  
HTML5, CSS3.

### Frontend Engineering

**React.js, Redux Toolkit, Tailwind CSS, Framer Motion, Next.js (Basics), Bootstrap.**

### Backend & Database

**Node.js, Express.js, MongoDB (Mongoose), RESTful APIs, Firebase, JWT.**

### Advanced Technologies

**Socket.io (Real-time), WebRTC (Streaming), PWA (Service Workers), AI Integration (Gemini), Clerk Auth.**

### Tools & DevOps

Git & GitHub, Postman, Vite, Vercel, Sevella, Linux (Basics), VS Code.

## CERTIFICATES

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### Front-End Development Diploma (React.js) ↗

Sef Academy

### Back-End Development Diploma (Node.js) ↗

Sef Academy

### Back-End Development Training Program ↗

Web Masters

### The Web Frontend Learning Guide ↗

Udemy

## LANGUAGES

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### Arabic

Native

### English

Professional Working Proficiency