

# Mahmod Ghnaj

## Senior Software Engineer | Full-Stack Engineer

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[Portfolio](#) | [GitHub](#) | [LinkedIn](#)

## Professional Summary

Software Engineer with 6+ years of experience in designing and building high-performance, scalable applications, specializing in full-stack development for AI and IoT projects. Strong expertise in system architecture, real-time data processing, and scalable distributed systems. Passionate about developing robust, maintainable solutions that optimize performance and support long-term growth.

## Professional Experience

### Senior Frontend Developer | Ntira AI Applications and Services Oct 2024 – Present

- Developed front-end solutions for multiple **AI-powered tools** used in complex medical systems, utilizing **Next.js and React**.
- Migrated a legacy **React** application to a scalable **micro-frontend architecture**, improving maintainability and enabling independent feature development.
- Designed and implemented the front-end architecture of an **AI-enabled hospital management platform** supporting complex medical workflows.
- Developed **AI-powered browser automation tools** as **Chrome Extensions** to streamline operations across enterprise medical platforms.
- Built and maintained **AI-integrated backend services using Node.js**, handling API orchestration, streaming responses, and AI tool integrations.
- Applied **Domain-Driven Design (DDD)** principles and **factory patterns** to structure scalable and maintainable AI-driven system architectures.

### Frontend Lead | Unifi Solutions Jul 2024 – Feb 2025

- Managed and led a team of 4 frontend developers, overseeing the full development lifecycle.
- Increased team efficiency by 20% through effective task delegation.
- Optimized performance, reducing load times from 8s to <1s, boosting user retention by 30%.
- Developed a reusable frontend component library, cutting development time by 40%.
- Built real-time data visualization tools using D3.js and Highcharts, improving decision-making.
- Designed a high-performance tracking system monitoring 5,000+ vehicles, reducing operational costs by 15%.
- Led platform localization efforts, ensuring seamless multilingual support.

### Senior Frontend Developer | Unifi Solutions Apr 2023 – Jun 2024

- Built a scalable component library, ensuring consistent UI across multiple projects.
- Optimized performance, reducing page load times and improving responsiveness.
- Developed dynamic form builders and configurable UI components, enhancing adaptability.
- Integrated real-time data streaming using WebSockets & GraphQL, enabling live dashboards.
- Designed interactive dashboards with D3.js, Recharts, and Chart.js.
- Refactored legacy codebases, implementing modern best practices.
- Implemented state management solutions with Zustand & Redux for scalability.

### Full Stack Developer | Disrupt-X May 2022 – Jun 2023

- Developed and maintained backend services using **Node.js, Express.js, and MongoDB** for scalable IoT platform features.
- Implemented **authentication and authorization systems** using secure token-based mechanisms to protect platform APIs.
- Designed and integrated **RESTful APIs** to support real-time data processing and communication between services.
- Collaborated on full-stack features connecting **frontend dashboards with backend data services**.
- Optimized database queries and backend performance to support large-scale **IoT data ingestion and processing**.

## Frontend Engineer | Disrupt-X

May 2021 – May 2022

- Developed a large-scale IoT platform, integrating advanced tracking and monitoring solutions.
- Optimized a real-time vehicle tracking system for 5,000+ assets, reducing costs by 15%.
- Designed a dynamic reporting system using Vue.js, enabling customized analytics dashboards.
- Led Google Maps integration, implementing features like tracking, geofencing, and clustering.
- Developed multilingual platforms, enhancing global accessibility.
- Built reusable UI components to improve modularity and scalability.

## Full-Stack Developer | Freelance

Jan 2020 – May 2021

- Developed and maintained platforms for car dealership & real estate management.
- Built web applications using Node.js, Next.js, and MySQL.
- Improved SEO & performance using SSR with Next.js.
- Integrated OAuth authentication (Google, Facebook, Apple) for secure user access.
- Optimized systems to handle high data volumes smoothly.

## Technical Skills

- **Frontend:** Next.js, React.js, TypeScript, JavaScript, Zustand, Redux, Context API, Tailwind CSS, styled-components, Material UI, Bootstrap, CSS3, HTML5, Web3
- **Backend:** Node.js, NestJS, REST APIs
- **Data & Performance:** WebSockets, GraphQL, MongoDB, MySQL, D3.js, Highcharts, Chart.js
- **Cloud & DevOps:** Docker, CI/CD (GitHub Actions, Jenkins, Bitbucket), AWS, Firebase
- **Others:** Blockchain (Ethereum, Solidity, Web3.js), OAuth, Localization, PWA

## Education

- **B.Sc. in Computer Science | AI-Baath University** **2016 - 2020**  
**Thesis:** Developed a secure electronic voting system using Ethereum, Solidity, Truffle, and Web3.js.

## Key Projects

<p><b>Disrupt-X</b> : Enterprise IoT&amp;AI analytics platform</p> <p><b>ABIOT</b>:IoT marketplace for smart city solutions</p> <p><b>climacert X</b>: Smart building automation and facility management</p> <p><b>Medxsol   Healthcare Solutions</b>:AI-enabled healthcare medication management system</p> <p><b>ALEF</b> : Multi-protocol IoT device management</p> <p><b>Fleet Management</b> :GPS fleet platform</p> <p><b>Asset Watch</b> : Indoor IoT asset tracking system</p> <p><b>Cracking IoT</b> : The largest IoT event in MENA</p>	<p><b>Asset Management</b> : AI-powered facility monitoring platform</p> <p><b>IBMS</b>: Take Full Control of Your Building</p> <p><b>IoT Security</b>: security monitoring platform</p> <p><b>Aligner-KDS</b> : kitchen display order system</p> <p><b>Metro Locks</b> : Smart access control and parking system</p> <p><b>Ignite Shield</b> : IoT solution revolutionizing facility and asset monitoring.</p>
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