

# Muhammad Ahad

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## TECHNICAL SKILLS

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**Programming Languages:** JavaScript, TypeScript, Python

**Frontend Technologies:** React, Next.js, React Native, Redux, HTML5, CSS3, Tailwind CSS

**Backend Technologies:** Node.js, Flask, FastAPI, Microservices, Event-Driven Systems, WebSockets, MQTT

**Databases:** PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch

**Cloud & DevOps:** AWS (EC2, S3, Lambda), Docker, Kubernetes, CI/CD, GitHub Actions, NGINX

**AI & Machine Learning:** OpenAI, LangChain, LangGraph, RAG, Vector Databases

## PROFESSIONAL EXPERIENCE

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### Software Engineer

*Remote, USA Jun 2023 –*

*LeaseMagnets (tour.video [🔗](#) / YC-backed)*

*Present*

- Led architecture and scaling of **LeaseMagnets**, delivering interactive virtual tours, embedded lead capture, and analytics for multifamily and student housing operators
- Owned end-to-end development across **Next.js**, **Node.js**, and **Flask** microservices, shipping reliable production systems used across thousands of property experiences
- Designed **RESTful and event-driven systems**; migrated **MySQL** → **PostgreSQL (Supabase)** with zero downtime and improved reliability
- Built scalable **media pipelines, queues, and cron automation** supporting video/photo processing, analytics, and lifecycle messaging via Twilio and SendGrid
- Developed property intelligence platforms including **tour.report** [🔗](#) (competitive data scraping and insights) and **tour.photos** [🔗](#) (AI-generated marketing imagery)
- Implemented **product analytics** with Jitsu and BigQuery and delivered reusable **embeddable React components** optimized for cross-site performance and tracking

### MERN stack Developer

*Multan, Pakistan Aug*

*ZeeSoft*

*2021 – May 2023*

- Contributed to 8+ production-grade backend projects, delivering scalable and maintainable solutions with a focus on performance and security
- Built and documented RESTful APIs using Express.js for web and mobile clients, implementing standardized error handling and consistent response formats
- Optimized and refactored existing codebases to improve maintainability, scalability, and query performance
- Designed and implemented MongoDB schemas with Mongoose, leveraging references and indexes for efficient data retrieval
- Integrated backend services with validation and sanitization layers using middleware and Yup, ensuring robust data integrity
- Implemented authentication, authorization, and role-based access controls to secure APIs and sensitive endpoints

### MERN Stack Developer

*Multan, Pakistan Jan*

*Zeol*

*2021 – Aug 2021*

- Built and documented REST APIs using Express.js for React and React Native client applications with standardized error handling
- Implemented Redux Toolkit patterns and normalized state management for performant data handling and offline-friendly workflows
- Designed scalable MongoDB schemas with Mongoose, utilizing references and optimized indexes for improved query performance
- Integrated frontend API layers with robust form validation using React Hook Form and Yup, implementing

route guards and lazy loading

- Mentored junior developers and interns on MERN stack fundamentals, code reviews, and established Git workflows with linting standards

## EDUCATION

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**Bahauddin Zakariya University**

2018 - 2020

*Master of Science in Computer Science*

- GPA: 3.46/4.0
- **Final Year Project:** Tourism Management System using MERN Stack

## KEY PROJECTS

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### **Tour — AI-Powered Virtual Sales Concierge for Property Managers**

- Enterprise-grade virtual leasing platform delivering 24/7 AI-guided tours and live video sessions with embeddable widgets and PMS integrations (Entrata, Yardi)
- Achieved over 1.1M tours for 130+ property managers, boosting lead conversions by 75% and closing rates by 25%
- **Technologies:** Next.js, TypeScript, OpenAI, Supabase, Flask, PostgreSQL, Redis, Docker, GCP

### **ManaPNL — AI-Powered Inventory & Data Management Platform**

- Built an AI-driven wholesale inventory, sales, and financial intelligence platform enabling real-time tracking of purchases, returns, payments, and client balances
- Implemented a LangGraph-powered AI assistant capable of executing business actions (inventory, expenses, reconciliation) with transactional accuracy
- Architected a Dockerized **Node.js + MongoDB** backend with RBAC, JWT auth, audit logs, and Stripe-ready subscriptions; deployed on Linux with PM2 monitoring
- **Technologies:** Node.js, TypeScript, LangGraph, OpenAI, MongoDB, Docker, PM2, Linux, JWT, RBAC, Stripe

### **AI-Powered Bulk SMS Management**

- Designed a high-volume, compliant SMS delivery platform integrated with **Ejoin 512-SIM Gateway**, supporting multi-SIM routing, smart scheduling, and per-SIM rate limits
- Integrated AI-generated message variations to reduce carrier filtering, enable bilingual campaigns, and improve delivery performance across Canada
- Utilized **BullMQ and Redis** for distributed job processing, queue management, retries, and real-time delivery orchestration at scale
- **Technologies:** Node.js, React.js, MongoDB, BullMQ, Redis, Socket.io, MERN

### **Freshlay — Food & Grocery Delivery Ecosystem**

- End-to-end delivery platform with customer web/mobile apps, rider app, and real-time order tracking using WebSocket and Mapbox integration
- Implemented secure JWT authentication, Redux state management, and integrated Twilio for SMS notifications
- **Technologies:** React, React Native, Node.js, MongoDB, WebSocket, Mapbox, JWT, Twilio

### **Water Analysis IoT System**

- Developed IoT system with MQTT protocol for device communication and WebSocket implementation for real-time sensor monitoring
- Built comprehensive analytics dashboard for device performance tracking and data visualization
- **Technologies:** React, Node.js, MQTT, WebSocket, MongoDB, IoT sensors