

TALHA AHMAD

Full-Stack Developer • Next.js • TypeScript • Node.js • AI Engineering

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PROFESSIONAL SUMMARY

Full-Stack Developer and **two-time 1st place winner** (IBA Karachi Hackfest 2026 • FAST NUCes forensic challenge). **Solo-shipped** a production SaaS with real users, automated pipelines, and zero manual intervention at **\$0.62** infrastructure cost. Ships production-ready systems with real users and a proven track record in competitive AI engineering challenges.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL

Frontend: React.js, Next.js, Server Actions, Tailwind CSS, Zustand, Component-Based Development, Responsive Web Design

Backend: Node.js, Express.js, REST APIs, WebSockets, Socket.IO, Authentication, Authorisation, JWT, OAuth 2.0, Webhooks, API Integration, Secure Coding Practices

Databases: MongoDB, PostgreSQL, Supabase, Firebase, SQL, Data Modelling

AI Engineering: LangGraph, Google Gemini API, Multi-Agent Systems

Infrastructure & DevOps: Vercel, Railway, Cloudflare R2, Upstash Redis, Git, GitHub, CI/CD, Distributed Systems, Production Systems, Clean Architecture

Tools & Practices: Technical Documentation, Debugging, Performance Optimisation

AWARDS & ACHIEVEMENTS

1st Place Hackfest × Datathon 2026, GenAI Module • IBA Karachi • 88/100 |

<https://talhaahmad.me/certificates>

Beat 15+ teams (FAST, Bahria) by 4 points. Built a multi-agent AI with a Director layer enforcing plot pacing and action quotas.

1st Place: Guilty By Data, The Ashworth Affair • FAST NUCes • 836/1000

Data forensics challenge. Used Python, Pandas, and NumPy to solve a murder mystery via pattern detection.

EXPERIENCE

Freelance Full-Stack Developer • Self-Employed | Karachi | 2024 – Present

- **Built and shipped StayDue**, a production SaaS that automatically reminds university students of upcoming deadlines via WhatsApp and email.
- **Developed Vestra**, a full-stack e-commerce platform for a clothing brand, integrating Leopard Courier API for automated shipping workflows and a complete admin panel for order and inventory management.
- Architected secure authentication and authorisation across all projects using JWT, OAuth, session management, and HMAC webhook validation **for Meta WhatsApp Business API**.
- Deployed all client projects to cloud infrastructure (Vercel, Railway) with CI/CD pipelines.

**Director, Modules & Operations • Technova | IEEE IoBM Student Branch
Karachi | March 2026 – August 2026**

- Led a cross-functional team of 8 developers across 4 technical competition modules, coordinating planning, development, testing, and event-day execution.
- Directed module readiness by reviewing technical progress, coordinating with faculty advisors and module leads, and ensuring modules met operational requirements before deployment.
- Established engineering standards covering authentication, secure API key management, dependency maintenance, and production readiness across development teams.

- Collaborated with faculty, lab supervisors, and organizing committees to coordinate module testing, infrastructure readiness, participant flow, and final event operations.
- Successfully oversaw the execution of multiple technical modules during **Technova 2026**, ensuring smooth coordination between module teams, faculty, judges, and volunteers.

PROJECTS

StayDue | Founder & Solo Developer | staydue.app | 2026

Next.js • TypeScript • MongoDB • NextAuth • Meta WhatsApp Business API • Resend • Cloudflare R2 • Vercel Cron

- Shipped production SaaS syncing Moodle calendars to WhatsApp + email via an automated pipeline running three times daily.
- **Achieved 100%** onboarding conversion (**6/6 real users**), double the **40-60%** industry average.
- Built HMAC webhook security, atomic rollback on delivery failure, and per-user trial enforcement.
- Ran infrastructure at **\$0.62 total cost** (**62 WhatsApp messages × \$0.01**)

Market Mayhem | Real-Time Trading Simulation | github.com/Talhaahmad9/stock-challenge | 2026

Next.js 15 • TypeScript • Supabase • Socket.IO • Zustand • Railway • Vercel

- Built a real-time multiplayer stock trading platform **running live for 19 concurrent teams** (zero crashes, zero disconnects).
- Architected a distributed system solving Vercel serverless WebSocket limitation via a standalone Socket.IO server on Railway.
- Designed a horizontal scaling path to **500+ users** using Redis adapter.
- Delivered live leaderboards, timed trading rounds, and an admin control panel.

Multi-Agent Simulation Engine | 1st Place • IBA Karachi Hackfest |

github.com/Talhaahmad9/GenAi_DSS | 2026

Python • LangGraph • Google Gemini 2.0 Flash • Pydantic • Next.js • Tailwind CSS

- **Built a multi-agent AI** system with a Thought-Action-Dialogue loop coordinated by a Director layer enforcing plot pacing and physical action quotas.
- **Won 1st place** (88/100) **against 15+ teams**; margin over 2nd place (84/100) was 4 points.
- Designed physical action quota rules that unexpectedly created natural narrative pacing without explicit scripting.
- **Built a Next.js real-time dashboard** for live monitoring of agent decisions and world state.

NextForge | Security-Focused Auth Scaffold (Open Source) | nextforge.talhaahmad.me | 2026

Next.js 16 • NextAuth v5 • TypeScript • MongoDB Atlas / Supabase / Firebase • Upstash Redis • Resend • Zod

- Open-sourced production-ready Next.js auth scaffold with registration, email verification, login, and password reset flows.
- Implemented **timing-safe OTP comparison** (crypto.timingSafeEqual), preventing timing attacks.
- Rate limiting via Upstash Redis (shared counter across serverless instances, preventing distributed bypass).

Portfolio CMS | talhaahmad.me | 2026

Next.js • TypeScript • MongoDB • NextAuth • Cloudflare R2 • Tailwind CSS • Vercel

- Full-stack portfolio with private admin dashboard content served dynamically from MongoDB, zero redeployments for updates.

- Integrated Cloudflare R2 for image storage and hot-swappable CV delivery.
- Implemented JSON-LD structured data, Open Graph, sitemap, and robots.txt for full SEO optimisation.

EDUCATION

B.Sc. Computer Science | Institute of Business Management (IoBM) • Karachi

6th Semester — expected 2027 | CGPA: 3.2

Relevant coursework: Data Structures, Algorithms, Software Engineering, Artificial Intelligence, HCI. Digital Logic and Design: 95% theory, 100% lab (A+).

CERTIFICATIONS

React The Complete Guide (incl. Next.js, Redux) • Udemy | <https://talhaahmad.me/certificates>

The Complete Full-Stack Web Development Bootcamp • Udemy | <https://talhaahmad.me/certificates>