HANZLA AHMAD

Full-Stack & Systems Software Engineer

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PROFESSIONAL SUMMARY

Results-driven Full-Stack & Systems Software Engineer with 4+ years of hands-on experience building production web platforms, deterministic Linux background daemons, and Generative AI agent systems. Proven expertise engineering type-safe architectures with Next.js 15, React 19, and TypeScript, building low-level Unix services with WebSockets and IPC, and deploying tamper-resistant database platforms with PostgreSQL and SQLite. Experienced in managing the entire software lifecycle from requirements synthesis to containerized Linux VPS deployment.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES6+), Python, C++, Java, Dart, SQL, Bash / Shell Scripting

Frontend & Web Platforms: Next.js 15 (App Router, Server Actions, RSC), React 19, Tailwind CSS, HTML5, CSS3, Vite, Responsive UI/UX

Backend & APIs: Node.js, Express.js, RESTful APIs, WebSockets, Prisma ORM, Microservices Architecture, Unix Domain Socket IPC

Databases & Storage: PostgreSQL, SQLite (WAL mode), MongoDB, Redis, Supabase, Cloud Firestore

AI & Agentic Systems: Google Gemini API, Claude API, LLM Function Calling, RAG (Retrieval-Augmented Generation), Prompt Engineering

DevOps & Infrastructure: Linux (Ubuntu/Debian), systemd Daemons, Docker, Nginx (Reverse Proxy), CI/CD (GitHub Actions), Git, Vercel

PROFESSIONAL EXPERIENCE

HA Entertainment | ***Founder & Lead Systems Engineer*** Jun 2020 – Present | Lahore, Pakistan

- Architected and deployed full-stack digital media platforms and operational infrastructure serving active client workloads with sub-second response times.
- Designed high-performance web frontends and microservices utilizing Next.js, React, Node.js, and TypeScript with strict type safety.
- Provisioned and managed Linux VPS servers, configuring automated cron backups, Nginx reverse proxies, SSL/TLS certificates, and systemd services with 99.9% uptime.
- Directed continuous delivery (CI/CD) pipelines across Vercel and bare-metal environments, ensuring zero-downtime production releases.

MedBills MBS | ***Information Technology Administrator*** Nov 2025 – Oct 2026 | Lahore, Pakistan

- Administered core enterprise IT infrastructure, network security, and portal workflows supporting medical billing operations.
- Enforced role-based access control (RBAC), end-to-end data encryption, and network firewall policies compliant with industry privacy standards.
- Automated weekly database backups, system health monitoring scripts, and credential rotation protocols, resolving 100% of reported infrastructure tickets within SLA.

Ajwa Mart Sweets & Bakers | ***IT Systems & POS Specialist*** Jul 2021 – Present | Chichawatni, Pakistan

- Engineered Point-of-Sale (POS) synchronization and multi-branch retail inventory tracking across 140+ retail stock items.
- Developed custom Shopify Liquid modules, optimizing checkout flow, cart performance, and responsive product catalog browsing.
- Automated dual-shift end-of-day sales reconciliation workflows, eliminating discrepancies between register cash counts and inventory balances.

IT Beam | ***MERN Stack Developer Intern*** Jul 2026 – Sep 2026 | Lahore, Pakistan

- Developed core modules of an enterprise Learning Management System (LMS) using MongoDB, Express.js, React.js, and Node.js.
- Implemented role-based dashboards (Admin, Instructor, Student), course curriculum management, and automated quiz evaluation engines.
- Built and documented RESTful API endpoints with JWT authentication and input validation, improving API test coverage.

DevelopersHub Corporation | ***Software Engineering Intern*** Mar 2025 – May 2025 | Remote

- Collaborated in an agile scrum team to deliver feature enhancements and bug fixes for responsive web applications.
- Participated in weekly code reviews, Git feature-branch workflows, and automated regression testing.

FEATURED ENGINEERING PROJECTS

WA-Agent — Autonomous AI Agent Control Plane & Terminal Supervisor TypeScript, Node.js, WebSockets, systemd

- Engineered a deterministic remote control plane allowing terminal-based CLI agents (e.g., Claude Code) to be supervised via WhatsApp.
- Architected dual-process daemon architecture with token-authenticated Unix Domain Socket IPC for secure command dispatching.
- Implemented real-time bidirectional streaming of terminal stdout/stderr chunks with auto-reconnection and session persistence.

ReqForge — AI Requirements Engineering & PRD Platform Next.js, React, TypeScript, Gemini 2.0 API

- Developed an AI Studio application that transforms ambiguous product briefs into structured, IEEE 830-compliant Software Requirement Specifications (SRS/PRD).
- Designed multi-stage prompt orchestration pipelines with strict JSON schema validation and export capabilities (Markdown, PDF).

Franchise Expense Reconciliation System Node.js, Express.js, PostgreSQL, Prisma ORM

- Built an enterprise operational accounting system deployed in production at Jazz Franchise 7301 for daily petty cash and expense reconciliation.
- Structured tamper-resistant audit logs and shift closure verification, ensuring 100% financial accuracy across physical cash handoffs.

Pepsi Stock Balance Portal Next.js 15, React, TypeScript, Prisma ORM

- Built a commercial beverage distribution and inventory reconciliation platform tracking delivery truck stock vs empty crate returns.
- Implemented real-time batch reconciliation algorithms preventing inventory variance across warehouse dispatch cycles.

whatsapp-widget-daemon Node.js, Baileys, Unix Domain Sockets, IPC

- Developed a low-overhead headless background daemon over Baileys WebSockets providing desktop widget frameworks with live WhatsApp event data over local Unix sockets.

EDUCATION

Bachelor of Science in Computer Science (BSCS) 2022 – 2026

Riphah International University, Lahore, Pakistan

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Database Systems, Computer Networks, Software Engineering, Object-Oriented Programming, Theory of Automata.

VERIFIED CERTIFICATIONS & CREDENTIALS

Google Cloud Skills Boost: Responsible AI: Applying AI Principles with Google Cloud (2026), Introduction to Large Language Models (2026), Introduction to Generative AI (2026)

Cisco Networking Academy: Python Essentials 1 (2026), Linux Unhatched (2026), Introduction to Cybersecurity (2026), Networking Basics (2026), Computer Hardware Basics (2026), Operating Systems Basics (2026), JavaScript Essentials 1 & 2 (2026), C++ Essentials 2 (2025), Introduction to IoT (2024)

Language Proficiency: fondi Inc: CEFR B2 Independent English Proficiency Certification (2024)