

Muhammad Ahsan Adil

Full Stack Engineer / Cloud Engineer



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SUMMARY

Results-driven Full-Stack Developer with over 4.5 years of experience designing and developing scalable web applications and APIs with a focus on performance and security. Proficient in building **RESTful APIs**, implementing **cloud infrastructure (AWS, Azure)**, setting up **CI/CD pipelines** with **GitHub Actions**, and working with **microservices architectures**. Proven track record of leading complex projects, optimizing system performance, and strengthening application security. Adept at delivering robust, high-quality solutions in **Agile environments**.

PROFESSIONAL EXPERIENCE

Improdata Karachi, Pakistan
A software development company specializing in innovative data infrastructure and analytics solutions.

Full-stack Developer Aug '24 — Apr '25

- Deployed backend services to Amazon Web Services (AWS) EC2 instances, increasing system scalability by 25%, improving load balancing, and ensuring 99.9% uptime for critical services.
- Implemented real-time communication with WebSockets, reducing latency by 30% and enhancing user experience for dynamic interactions.
- Optimized server performance using Amazon Web Services (AWS) load balancers, improving traffic distribution and reducing downtime by 15%.
- Build scalable backend services with TypeScript, Express, MySQL, and PostgreSQL, which handled an increase in user activity by 40% during peak traffic.
- Deployed backend services on Amazon Web Services (AWS), Azure App Services and Azure Virtual Machines (VMs) for scalable, efficient hosting and enhanced control over server environments.
- Utilized python to develop data scraping scripts & triggered scripts through the node.js, returning the extracted data seamlessly, reducing manual data collection time by 60%.
- Migrated a Django-based database from SQLite to PostgreSQL, improving database performance and query speed by 50% & deployed app on App Services and on Azure VMs.
- Developed high-performance mobile applications for iOS and Android using React Native and TypeScript.

Back-end Developer(Apprenticeship) May '24 — Jul '24

- Designed and developed RESTful APIs using TypeScript and Express, reducing API response time by 25%.
- Managed and optimized MySQL databases on Azure, enhancing database query efficiency and reducing server load by 20%.
- Focused on backend development with Node.js and TypeScript, gaining hands-on experience in building and maintaining server-side applications.

Zarupt Karachi, Pakistan
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Cloud Developer Dec '23 — Apr '24

- Designed, deployed, and managed scalable, high-performance cloud solutions using AWS and Azure platforms.
- Leveraged AWS services including EC2, S3, Lambda, and RDS, and Azure services like Azure App Services, Blob Storage, and Azure SQL Database to build and maintain cloud-based applications.
- Automated cloud infrastructure and tasks using scripting languages such as Python, Bash, and PowerShell to improve operational efficiency.
- Worked with GitHub Actions to automate and streamline the deployment process, improving deployment efficiency and reducing manual errors.
- Monitored and optimized cloud environments using AWS CloudWatch and Azure Monitor for proactive performance management and issue resolution.
- Ensured infrastructure security, scalability, and cost-efficiency by leveraging the best practices in cloud architecture.

Full-stack Developer

Jul '20 — Nov '23

- Worked with various technologies across both the front-end and back-end to develop and maintain robust applications.
- Developed responsive and dynamic web applications using React.js and Next.js, ensuring a seamless user experience.
- Designed and built server-side applications using Node.js and Express.js, creating efficient, scalable APIs and handling application logic.
- Developed a driving application using Kotlin and XML, with a focus on providing user-friendly navigation and efficient ride management features.
- Optimized the app's performance and contributed to the successful implementation of new features, ensuring smooth user experience and reliable functionality.
- Worked closely with the team manager on multiple projects, ensuring all tasks were completed on time and according to project requirements.

EDUCATION

Bachelor of Science in Computer Science, Iqra University (GPA: 3.32/4.00)

Jul '20 — May '24
Karachi, Pakistan

- Completed a comprehensive curriculum with a focus on Data Structures, Algorithms, Web & Mobile Application Development, Cloud Computing, and Software Engineering.
- Final year project, "*Behtar Raasta*", utilized YOLOv8 for pothole detection, integrated with a React Native app and a Golang backend. Active participant in university hackathons and tech meetups.

HONORS & AWARDS

Ranked Top in Final Year Project and received Funding from Ignite Pakistan (National Technology Fund) | 2024 | Karachi, Pakistan

First position in speed coding competition at Usman Institute of Technology (UIT) | 2023 | Karachi, Pakistan

Received a cash reward of 10,000 for achieving 100% in Computer Science on the Secondary Education Board exam | 2018 | Karachi, Pakistan

Awarded a shield at Adamjee Coaching Centre for achieving an A-1 grade in the board exam | 2018 | Karachi, Pakistan

PROJECT EXPERIENCE

AutoCare360 - Vehicle Service Management System [Link](#)

- Built a full-stack medical dashboard system using Next.js (frontend), TypeScript/Node.js (backend), and MongoDB (database).
- Developed a full-stack vehicle service management platform using Next.js (frontend), TypeScript/Node.js (backend), and MongoDB as the database.
- Designed a modern, responsive admin dashboard with TailwindCSS, Next.js App Router, and Recharts, enabling auto workshops to monitor appointments, service records, and revenue in real time.
- Implemented role-based access control with JWT authentication, allowing separate access for admins, mechanics, and reception staff.
- Created RESTful APIs for managing customers, vehicles, service records, invoices, appointments, and inventory.
- Integrated advanced features including PDF invoice generation and file uploads (before/after service images).
- Built secured endpoints with strong validation, error handling, and modular code structure using MVC pattern and middleware.
- Enhanced operational efficiency by enabling customer search, service history tracking, appointment reminders, and downloadable invoices.
- Delivered a production-ready platform that streamlines vehicle maintenance tracking for workshops and garages.

CliniTrack - Medical Dashboard System [Link](#)

- Built a full-stack medical dashboard system using Next.js (frontend), TypeScript/Node.js (backend), and MongoDB (database).
- Developed a responsive admin interface with Next.js, TailwindCSS, and Chart.js, enabling real-time insights into patients, appointments, and revenue.
- Integrated protected routes, dynamic charts, table filters, and modular UI components to ensure smooth user experience for admins and staff.
- Designed a modular backend with TypeORM, JWT authentication, and role-based access control.
- Built RESTful APIs for patients, appointments, medical records, invoices, providers, and reports.

- Implemented secure endpoints with validation, audit logging, and PDF generation features for medical records and invoices.
- Resulted in a production-ready platform streamlining healthcare operations for clinics and hospitals.

Chatbot Program with Llama 4 & Groq [Link](#)

- Developed an AI-powered chatbot using JavaScript, integrating the Llama 4 model for conversation and Groq API for real-time interaction.
- Implemented streamed responses and chat history features to provide a dynamic and meaningful user experience.
- Set up Node.js backend with groq-sdk, readline-sync, and dotenv for seamless chatbot operation and error handling.
- Built a complete environment setup including API key management and automated conversation flow, enhancing user engagement.
- Improved user engagement by adding features like exit commands and robust error handling, ensuring smooth chatbot operations.

California Pizza Clone [Link](#)

- Developed a full-stack web application using Next.js, TailwindCSS, Node.js and MongoDB. Implemented features that allow users to browse the menu, select items, and place orders.
- Implemented a robust admin panel to manage products and order, reducing admin operational time by 40.

Behtar Raasta (Final Year Project) [Link](#)

- Developed a cross-platform mobile app using React Native to provide optimized navigation by identifying the shortest path with the least potholes.
- Utilized Next.js for the admin panel, Golang for the backend, PostgreSQL for the database, and YoloV8 for object detection.
- Integrated PostgreSQL for real-time route optimization, resulting in a 20% improvement in navigation.

Hotel Management System [Link](#)

- Built a hotel management system in Java, allowing users to check room availability and book rooms. Increased user satisfaction by streamlining the booking process, reducing booking time by 30%.

University GPA Calculator [Link](#)

- Created GPA calculator using HTML, CSS, and JavaScript that allows students to easily calculate their GPA without needing to manually input formulas.
- This tool has simplified the process for 50% of students, enabling them to quickly calculate their grades and reducing the efforts required to track academic progress.

Leaflet Map Integration [Link](#)

- Integrated a Leaflet map with React and Material-UI, allowing seamless map functionality in front-end projects.
- This integration has made it easier and faster to add interactive maps to future projects, significantly reducing the time spent researching map-related solutions and improving project efficiency.

SKILLS

Back-end Technologies Node.js, Express, Nest.js, Python, Java, Golang, Redis, Firebase, MySQL, MSSQL, MongoDB, PostgreSQL

Cloud Services Azure, AmazonWeb Services (AWS), Firebase

Version Control Git (Github)

Front-end Technologies Next.js, React.js, Redux, JavaScript, Tailwind, Bootstrap, HTML, CSS

Mobile Development React Native (CLI), Kotlin, Android Studio

CERTIFICATIONS

- Node.js from TestDome
- React from TestDome
- SQL from TestDome
- Modern JavaScript for React JS – ES6 from Udemy
- Complete JavaScript & jQuery Courses with Bonus Vue JS Intro from Udemy
- Python for Beginners - Learn All the Basics of Python from Udemy
- HTML5 and CSS3 Build: Two Responsive Websites in Hindi/Urdu Udemy
- HTML/CSS TestDome
- Introduction to Web Development [HTML, CSS, JavaScript] Udemy