

Muhammad Shawaiz

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PROFESSIONAL SUMMARY

Motivated Full Stack Software Engineer with 1+ year of experience building scalable web applications using MERN stack (MongoDB, Express.js, React, Node.js). Demonstrated ability to deliver high-quality solutions with modern frontend frameworks, robust backend APIs, and AI integrations. Specialized in developing responsive user interfaces, RESTful API design, and real-world AI-powered applications. Strong academic foundation in Computer Science with 3.78 GPA and a diverse portfolio of full stack projects.

EDUCATION

Bachelor of Science in Computer Science

PMAS Arid Agricultural University – GPA: 3.78 / 4.0

Expected Graduation: May 2026

Gujrat, Pakistan

Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Object-Oriented Programming, Web Development, Software Engineering, Operating Systems, Computer Networks

TECHNICAL SKILLS

Programming Languages: JavaScript (ES6+), TypeScript, Python, C#, PHP, HTML5, CSS3, SQL

Frontend Technologies: React.js, Next.js, Redux, Context API, Tailwind CSS, Bootstrap, Responsive Design

Backend Technologies: Node.js, Express.js, RESTful API, JWT Authentication, Server-Side Rendering (SSR)

Databases: MongoDB, PostgreSQL, MySQL, SQL Server, Supabase, Database Design, Query Optimization

DevOps and Tools: Git, GitHub, VS Code, Postman, Nodemailer (SMTP), Agile Methodologies, Version Control

AI and Emerging Tech: OpenAI API Integration, GPT-4, Agentic AI Systems, Third-Party AI API Integration

Core Competencies: Full Stack Development, MERN Stack, API Development, Image Processing Pipelines, Problem Solving

PROFESSIONAL EXPERIENCE

Software Engineering Intern – Full Stack Development

Jan 2026 – Present

Gujrat, Pakistan

VisionBird Technology Software House – On-Site

- Developed an AI-powered Hairstyle Changer web application using Vite, Node.js, and Express.js, integrating the Hairstyle Changer Pro API to generate realistic hairstyle and hair-color transformations from user-uploaded facial images
- Implemented a comprehensive image validation pipeline enforcing format (PNG, JPG, JPEG), file size (max 5MB), resolution (200x200px to 4096x4096px), face visibility, and minimum facial proportion (10 percent of image area) to reduce API failure rates
- Designed a structured image-processing pipeline covering upload, validation, API request, AI processing, and result rendering with asynchronous request handling and API failure recovery for 422 and validation errors
- Built and deployed a full stack Professional Restaurant Management Website using the MERN stack with secure RESTful APIs, MongoDB schemas for menu, orders, and customer data, and a complete online ordering workflow
- Integrated automated email notification system using Nodemailer (SMTP) for order confirmation emails to customers and real-time order alerts to administrators, along with an admin dashboard for order tracking and management

Full Stack Developer (MERN Stack Specialist)

November 2024 – Dec 2025

Gujrat, Pakistan

Freelance Software Developer

- Developed and deployed 5+ full stack web applications using MongoDB, Express.js, React.js, and Node.js, implementing modern development practices and responsive design principles
- Built secure RESTful APIs with JWT authentication and role-based access control, ensuring data protection and user privacy across all application endpoints
- Optimized database queries and React component rendering through efficient state management, improving application load times and overall user experience
- Integrated third-party AI APIs and external services into web applications, enabling intelligent features such as image processing and automated workflows
- Collaborated with clients using Git workflows and Agile methodologies to gather requirements, provide updates, and deliver projects on schedule

Software Engineering Intern – AI and React Development

Aug 2024 – Oct 2024

Gujrat, Pakistan

Cyber Silo – On-Site

- Developed and deployed 5+ full stack web applications using MongoDB, Express.js, React.js, and Node.js, implementing modern development practices and responsive design principles
- Built secure RESTful APIs with JWT authentication and role-based access control, ensuring data protection and user privacy across all application endpoints
- Optimized database queries and React component rendering through efficient state management, improving application load times and overall user experience
- Integrated third-party AI APIs and external services into web applications, enabling intelligent features such as image processing and automated workflows
- Collaborated with clients using Git workflows and Agile methodologies to gather requirements, provide updates, and deliver projects on schedule

TECHNICAL PROJECTS

AI-Based Hairstyle Changer Application | *Vite, Node.js, Express.js, JavaScript, REST API, AI Integration*

2026

- Developed an AI-powered web application enabling users to upload facial images and generate realistic hairstyle and hair-color transformations using an open-source Hairstyle Changer Pro API
- Implemented comprehensive image validation pipeline enforcing format (PNG, JPG, JPEG), file size (max 5MB), resolution (200x200px to 4096x4096px), face visibility, and facial angle constraints
- Designed a structured image-processing pipeline covering upload, validation, API request, AI processing, and result rendering to ensure consistent and reliable outputs
- Built RESTful backend services using Node.js and Express.js with asynchronous request handling, error detection, and API failure recovery for 422 and validation errors
- Improved system reliability by filtering non-compliant inputs before AI processing, enforcing minimum facial proportion (10 percent of image area) to reduce API failure rates

Professional Restaurant Management Website | *MongoDB, Express.js, React.js, Node.js, Nodemailer (SMTP)*

2025

- Designed and developed a full stack restaurant web application using MERN stack with responsive, dynamic user interfaces built in React.js for seamless cross-device experience
- Developed secure RESTful APIs using Node.js and Express.js for order processing, data management, and backend validation with robust error handling and database integrity checks
- Designed MongoDB schemas for menu items, customers, orders, and order status tracking, supporting a complete online ordering workflow with cart management and price calculation
- Integrated automated email notification system using Nodemailer (SMTP) to send order confirmation emails to customers and order detail alerts to administrators
- Enabled admin-side order tracking and record management dashboard for efficient operational monitoring and order lifecycle visibility

Culinary AI – AI-Powered Restaurant Management System | *React, Node.js, Express.js, PostgreSQL, OpenAI*

2024

- Developed full stack restaurant management platform featuring GPT-4 powered conversational AI assistant for order processing, menu browsing, and table reservation management
- Built RESTful API backend using Node.js and Express.js to handle order management, user authentication, and reservation workflows with structured data validation
- Implemented real-time order tracking dashboard using Supabase Realtime, enabling instant updates between kitchen staff and customers
- Designed responsive frontend with React.js and Tailwind CSS, achieving strong performance metrics and mobile-first design for seamless cross-device user experience

MS-EventSphere – Event Management Platform | *React, Next.js, MongoDB, Express.js, Node.js*

2024

- Built dynamic event management system with server-side rendering using Next.js and MongoDB Atlas for scalable data storage and improved SEO performance
- Created comprehensive admin dashboard featuring event moderation, approval workflows, user management, and analytics for efficient platform administration
- Developed RESTful API with Express.js implementing routing, middleware for validation and authentication, ensuring secure and reliable data operations

Concert Booking Website | *HTML, CSS, JavaScript, PHP, Bootstrap, MySQL*

2023

- Developed a responsive concert booking platform with user authentication and dynamic ticket booking functionality using PHP and MySQL backend
- Designed interactive user interface with Bootstrap framework ensuring cross-device compatibility and smooth user experience across mobile and desktop
- Implemented secure MySQL database design managing user accounts, event information, and booking records with proper data integrity

Pharmacy Management System | *C#, .NET Framework, SQL Server, SSMS*

2023

- Created desktop application for pharmacy operations including inventory tracking, prescription management, and patient data handling with secure admin login system
- Designed relational database schema in SQL Server with normalized tables and optimized queries for efficient data storage, retrieval, and automated receipt generation