

GHULAM MUSTAFA

Full Stack Engineer | *React • Next.js • Node.js • Laravel • Python • AI/ML*

Email | *WhatsApp* | *Linkedin* | *GitHub* | *Portfolio*

Lahore, Pakistan | *Open to Remote & International Opportunities*

Social Media (Projects/Demos)

Facebook | *Instagram* | *TikTok* | *X* | *Threads*

PROFESSIONAL SUMMARY

Results-driven **Full Stack Developer** with **4+ years** of experience building scalable, high-performance applications using React, Next.js, Laravel, Python (Django/Fast API/Flask). Experienced in MERN/MEAN development, AI integration, microservices, REST APIs, Redis caching, and scalable system architecture. Proven track record of delivering end-to-end web and mobile solutions serving 10K+ active users, handling 100K+ daily API requests, and improving performance by up to 60% through optimization and caching. Strong Computer Science foundation (**CGPA 3.57/4.0**) with expertise in AI-powered applications, Computer Vision, and modern software engineering.

TECHNICAL SKILLS

Frontend: React • Next.js • Vite • TypeScript • Tailwind CSS • Bootstrap • HTML5 • CSS3

Backend: Laravel • Node.js (Express) • Python (Django, Fast API, Flask) • PHP/Core PHP • REST APIs • Postman

Databases: MySQL • MongoDB • MongoDB Atlas

DevOps & Deployment: Git • GitHub • GitHub Actions • Docker • Vercel • Render • Cloudflare • Production Deployment • Domain & Hosting Configuration

AI & ML Integrations: Open AI APIs • LLM Integration • Prompt Engineering • RAG • NLP • CV • Deep Learning

Architecture: MVC • Microservices • Redis Caching • Load Balancing • Scalable System Design

Programming: JavaScript (ES6+) • TypeScript • Python • PHP

WORK EXPERIENCE

Genuine Tech Software's | Full Stack Developer | July 2023 – June 2026

- *Developed **10+** scalable web applications using MERN/MEAN, Laravel, and Python (Django/Fast API), serving **10K+** active users in production.*
- *Designed and developed **20+** secure REST APIs with authentication, database optimization, caching, and third-party integrations, handling **100K+** API requests daily.*
- *Optimized backend performance using Redis caching, query optimization, and scalability techniques, reducing API response times by **30–50%**.*
- *Built responsive, high-performance user interfaces using React, Next.js, TypeScript, and Tailwind CSS, ensuring cross-browser compatibility and accessibility.*
- *Integrated Open AI APIs and AI/ML-powered features for intelligent automation, NLP, and workflow optimization.*
- *Managed MySQL and MongoDB databases, including schema design, indexing, query optimization, and performance tuning.*
- *Containerized applications using Docker and deployed production systems through Git, GitHub, Vercel, and Render, ensuring reliable releases and seamless domain and hosting configuration.*
- *Collaborated in Agile/Scrum teams, participated in code reviews, and delivered scalable, maintainable, production-ready software within project timelines.*

Shan Tech Software's | Frontend Developer | June 2022 – May 2023

- *Developed **8+** responsive, cross-browser-compatible web applications using React, Next.js, TypeScript, HTML5, CSS3, and Tailwind CSS.*
- *Converted **15+ UI/UX** designs into reusable React components following scalable frontend architecture and best practices.*
- *Integrated secure REST APIs and optimized client-side rendering, improving application performance by **25–40%**.*
- *Built reusable UI component libraries using Tailwind CSS and Bootstrap, ensuring design consistency and maintainability.*
- *Enhanced responsive layouts, accessibility, and frontend performance to deliver an optimized user experience across devices.*
- *Collaborated with designers and backend developers in Agile/Scrum environments to deliver high-quality, production-ready features within project timelines.*

PROJECTS

Nova Learn-AI (AI-Powered Learning Platform) | React • Node.js • Express • Fast API • MongoDB • Groq • Stripe

- Built a full-stack AI-powered learning platform with secure authentication, role-based access, and separate student/admin dashboards.
- Developed course enrollment, course management, and payment workflows using Stripe subscriptions and webhook integrations.
- Integrated Groq LLM services including AI Tutor chat, quiz generation, and text summarization for personalized learning workflows.
- Built scalable REST APIs using Node.js/Express and Fast API with MongoDB and Mongoose for data management and AI service integration.
- Developed responsive frontend using React, TypeScript, Vite, Tailwind CSS, and Axios for modern user experience.

AI Smart Assistant (Computer Vision + LLM Integration) | Fast API • MongoDB • Deep Face • Groq • OpenCV • JavaScript

- Built an AI-powered Smart Assistant integrating computer vision and LLMs for real-time face analysis, identity recognition, and personalized conversational responses.
- Implemented webcam and image-based face analysis using Deep Face to detect age, gender, and emotion in real time with optimized preprocessing using OpenCV and NumPy.
- Developed face registration and identification workflows using facial embeddings stored in MongoDB for persistent user recognition and profile management.
- Integrated Groq LLM to deliver context-aware chatbot responses personalized to recognized user identity and emotional state.
- Designed asynchronous REST APIs using Fast API and Motor for non-blocking processing and real-time AI inference.
- Built lightweight frontend with HTML, CSS, and JavaScript for webcam capture, image upload, and chatbot interaction.

AI Voice Chatbot (Multilingual Assistant) | Fast API • React • MongoDB • AI APIs

- Developed a multilingual AI Voice Chatbot supporting voice and text conversations across multiple domains including General, Medical, and Education.
- Integrated speech processing and AI APIs to support multilingual conversations in English, Urdu, Spanish, Arabic, French, and Hindi.
- Built responsive React frontend and Fast API backend with MongoDB for scalable data handling and conversation management.
- Implemented real-time chatbot workflows with domain-based responses and optimized API performance for production-ready usage.

EDUCATION

University of Lahore, Pakistan | Bachelor of Science in Computer Science (**BSCS**) | **2018 – 2022**

- **CGPA: 3.57 / 4.0 (89%)**
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RESEARCH EXPERIENCE

- *A Comparative Study on Full Stack Web Frameworks*
 - *Image Data Augmentation for Deep Learning: A Survey*
 - *Scene Text Detection and Recognition: The Deep Learning Era*
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RESEARCH INTERESTS

Artificial Intelligence • Machine Learning • Deep Learning • Computer Vision • AI-Integrated Web Systems
• LLM • Scalable Backend Architectures • Distributed Systems

LANGUAGES

English (Professional Working Proficiency) | **Urdu** (Native) | **Punjabi** (Native)