

Muhammad Bilal Naveed

Full Stack MERN Developer | AI/ML Enthusiast

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PROFESSIONAL SUMMARY

Full Stack MERN Developer with 2+ years experience building scalable web applications, RESTful APIs, and AI-integrated systems. Completed a production internship at Softsincs and delivered 10+ projects spanning real estate SaaS, LMS platforms, computer vision, and conversational AI. Proficient in JavaScript, Python, React.js, Node.js, MongoDB, and OpenAI/Gemini APIs. Seeking AI/ML or Python Software internship roles.

PROFESSIONAL EXPERIENCE

Software Development Intern – MERN Stack

06/2023 – 09/2023

Softsincs

Lahore, Pakistan

- Developed and maintained React.js frontend components for a live production MERN application, improving UI consistency across key user flows.
- Built and integrated RESTful API endpoints using Node.js and Express.js, implementing data validation, error handling, and MongoDB queries.
- Collaborated with senior developers in an Agile environment to deliver UI enhancements and bug fixes on schedule.
- Participated in code reviews and gained hands-on experience with production deployment workflows and best practices.

EDUCATION

Bachelor of Science in Computer Science

University of Engineering and Technology (UET), Lahore

CGPA: 3.4 / 4.0

Relevant Coursework: Data Structures, Algorithms, Database Systems, Machine Learning, Compiler Construction, Parallel Programming, Software Engineering

TECHNICAL SKILLS

Programming Languages

JavaScript (ES6+), Python, HTML5, CSS3

Frontend

React.js, Next.js, React Native, Tailwind CSS

Backend

Node.js, Express.js, Django, RESTful API Design

Databases

MongoDB, PostgreSQL, SQLite

AI / ML

OpenAI API (GPT-3/4/5), Google Gemini, Llama, Dolphin, Computer Vision (OpenCV, MediaPipe)

Tools & Platforms

Git, GitHub, GitLab, Bitbucket, Docker, Postman, Vercel, VS Code

Other

Agile/Scrum, UI/UX Design, Project Management

PROJECTS

Smart City – Multi-Tenant Real Estate ERP SaaS

- Architected a multi-tenant SaaS platform covering finance, interactive plot mapping, and 10+ real estate business modules.
- Automated end-to-end property workflows (booking, payments, legal documentation), reducing estimated manual data entry by 70–80%.
- Implemented role-based access control (RBAC) for landlords, agents, tenants, and admins within isolated tenant environments.
- Tech Stack: React.js, Node.js, Express.js, MongoDB, Tailwind CSS

KidsHub – Gamified Learning Management System (LMS)

- Built an animation-enriched LMS for school-age students with interactive games, quizzes, and visual progress tracking.
- Designed 4 role-based dashboards: Student (mobile), Teacher, Parent, and Admin with assessment and analytics features.

- Integrated automated grading workflows enabling data-driven insights into individual student learning patterns.
- Tech Stack: React.js, Node.js, Express.js, MongoDB, Tailwind CSS, Flutter (mobile)

AI-Powered Chatbot – Full Stack Conversational AI

- Integrated Google Gemini API to deliver context-aware, real-time conversational responses in a full-stack web app.
- Implemented OTP-based email authentication using Nodemailer and JWT for secure, passwordless user access.
- Designed persistent chat history storage in MongoDB Atlas for cross-session continuity.
- Tech Stack: MERN Stack, Gemini API, Tailwind CSS, Vite

Eye-Controlled Mouse – Computer Vision Accessibility Tool

- Built a hands-free mouse control system using Python and OpenCV that maps real-time gaze direction to cursor position.
- Implemented blink-based click interactions: single blink (left click), double blink (double click), extended blink (long press).
- Applied facial landmark detection and gaze estimation algorithms for smooth, low-latency cursor control with no additional hardware.
- Tech Stack: Python, OpenCV, MediaPipe, PyAutoGUI

Web Crawler – Automated Lead Generation Tool

- Developed a Node.js-based web crawler to scrape and extract structured contact and business data for ad campaign targeting.
- Automated the lead discovery pipeline using headless browsing, reducing manual research by several hours per campaign cycle.
- Tech Stack: JavaScript, Node.js, Puppeteer, Cheerio

Smart Quest System – Role-Based Request Management

- Built a web application for students to submit and track academic requests through an automated faculty approval hierarchy.
- Implemented auto-escalation logic for requests exceeding response time thresholds with real-time status updates.
- Tech Stack: Django, SQLite, HTML/CSS, Tailwind CSS, JavaScript

CERTIFICATIONS & COURSES

Crash Course on Python

Google (Coursera)

Introduction to Computer Programming

University of London & Goldsmiths (Coursera)

Start Writing Prompts like a Pro

Google (Coursera)