

PAVAN KUMAR BARMAN

Full-Stack MERN Developer | AI Chatbot LLM Researcher | TechRxiv Published Author

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CAREER FOCUS

Full Stack Web Development

MERN Stack & Scalable App Development

- Focused on creating robust, responsive, and production-grade web applications.
- Skilled in React.js, Node.js, MongoDB, and RESTful APIs.

AI ML Integration

Smart Solutions Using NLP and LLMs

- Applying AI techniques to enhance user interactivity in web apps.
- Experienced in building intelligent features like AI Chatbots and personalized recommendations.
- Built offline intelligent chatbots using LangChain and locally hosted LLMs for custom data use cases.

PROJECTS

Full Stack E-commerce Website using MERN

Personal Project

- Developed a full-featured MERN-based e-commerce platform with product listing, cart, checkout, and admin panel.
- Integrated AI chatbot using Botpress with custom workflows that process PDFs, links, and text input via knowledge base.
- Built semantic document-based QA using external AI APIs, with future scope for offline integration using LangChain.
- Tech Stack: React.js, Node.js, Express.js, MongoDB, Tailwind CSS.
- Live Demo: full-stack-zbqz.onrender.com

SaaS-Based Multiple School Management System

Personal Project

Mar 2025 – May 2025

- Implemented a cloud-based platform to manage multiple schools with role-based access (Owner, Teacher, Student).
- Key modules: Role based features dashboards.
- Future scope includes integrating an offline chatbot using LangChain and LLaMA for internal queries.
- Live Demo: school-management-blocked.onrender.com

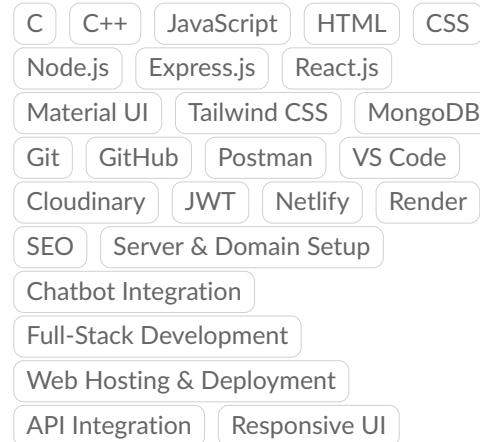
EDUCATION

B.Tech in Computer Science Engineering

Shri Ram Institute of Technology (SRIT) Jabalpur

Aug 2022 – July 2026 (Final Year)

TECHNICAL SKILLS



CERTIFICATIONS



GitHub Copilot (Microsoft)



Comprehensive Full Stack Web Development Course



Deep Learning for Developers



Principles of Generative AI



Introduction to Artificial Intelligence



Introduction to Natural Language Processing



Introduction to Data Science



JavaScript Essentials 1 & 2



Introduction to Cybersecurity



Agile Scrum in Practice



HTML and CSS

REAL-WORLD DEPLOYMENTS

School Management System – "My School"

Designed and deployed a comprehensive School Management System for R.P.P. Middle School, New Ramnagar, Satna (M.P.), which is in active use by teachers, students, and administrators.

- Implemented modules for administration (Dashboard, Classes, Subjects, Students, Examinations, Fees, Notices).
- Enabled teachers to manage attendance, timetables, and exam schedules digitally.
- Provided students and parents with progress tracking, schedules, fee updates, and notices.
- Incorporated an AI-powered chatbot to streamline queries and administrative support.
- Recognized with official certificates of appreciation from the school for successful deployment.

INTERNSHIPS

Full Stack Web Development Intern

Edunet Foundation (EY GDS AICTE)

⌚ May 2024 – July 2024 ⚡ Remote

- Learned and applied MERN stack in real-world development.
- Built 10+ reusable production-ready components using React.js and Node.js, improving UI load time by 20%.

AI Intern

TechSaksham (Microsoft + SAP + Edunet Foundation)

⌚ Feb 2024 – Apr 2024 ⚡ Remote

- Completed certified internship in AI under Microsoft and SAP's TechSaksham program.
- Developed a locally hosted QA chatbot using LangChain and LLaMA model without external APIs.
- Integrated vector-based document retrieval (RAG) and deployed using FastAPI on 8GB RAM systems.
- Hands-on experience in NLP, vector stores, and chatbot development using real-world use cases.

Google Student Ambassador

Ping Digital Broadcast Pvt. Ltd. (Google)

⌚ Aug 2025 – Dec 2025 ⚡ Remote

- Participated in the Google Student Ambassador Program for Google Gemini AI Trials.
- Acted as a Campus Ambassador to engage and educate fellow students on Google Gemini AI.
- Conducted outreach and activities to align with program objectives, including organizing workshops and events.
- Responsible for achieving a target of 1,250 or more Gemini trials during the program period.

Web Development Intern (React Native)

Duranos Robotics Pvt. Ltd. (KrishiVerse)

⌚ Nov 2025 – Present ⚡ Hybrid

- Working on React Native applications (Android & iOS)

PUBLICATIONS

Preprint

A Secure and Personalized AI Chatbot for School Performance Monitoring using Local LLM and MongoDB
Pavan Kumar Barman, TechRxiv, September 2025.

DOI:
10.36227/techrxiv.175329513.35733860/v2

Enhancing E-Commerce User and Admin Experience through AI-Integrated MERN Stack Platform
Pavan Kumar Barman, TechRxiv, August 2025.

DOI:
10.36227/techrxiv.175424275.53300767/v1

A Privacy-Preserving AI Symptom Checker using a Self-Hosted LLM for Basic Healthcare Guidance
Pavan Kumar Barman, TechRxiv, November 2025.

DOI:
10.36227/techrxiv.176114174.43989310/v1

LANGUAGES

English



Hindi

