

Rishabh Kumar Mandal

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Profile

Aspiring Software Developer with strong foundations in front-end and back-end development, passionate about building scalable and accessible web applications. Proven ability in delivering full-stack solutions, collaborating across teams, and integrating emerging technologies (AI/ML, & GenAI). Eager to contribute to impactful projects at a leading tech company.

Technologies

Languages: C, C++, Python, JavaScript, Java (Basics), Dart, TypeScript.

Frontend: React.js, Next.js, Flutter, HTML5, CSS3, Tailwind CSS.

Backend: Node.js, Django, REST APIs, Express.js, FastAPI.

Database : MongoDB, SQLite, PostgreSQL, Supabase

Tools: Git, GitHub, Figma, Postman , AWS

AI & Data Analytics: Generative AI, Generative modeling, Computer Vision, Lang-chain Model Tuning.

Education

Tula's Institute- Bachelor's in Computer Science	July 2022 – August 2026
• CGPA: 7.5	
• Coursework: DBMS, OOPS, Operating System, Computer Networks, Data Structures & Algorithm, Machine Learning, AI.	

Bristol Public School- CBSE board	April 2018 – June 2022
• With 81 %	

Certificates

Global Impact Certificate by AD Scientist Index 2025 (Certificate)

RCPL Add on Python Development Certificate (Certificate)

Microsoft Certified Machine Learning Developer (Certificate)

Microsoft Certified Generative AI Developer (Certificate)

Experience

Research Intern, Institute of Artificial Intelligence – DSVV, Haridwar Certificate	July 2024 – Feb 2025
• Collaborated on 4+ government-funded AI/IoT projects focused on Health-tech and Agri-tech platforms.	
• Developed internal dashboards using Django and REST APIs for real-time analytics and reporting.	
• Developed research projects focused on AI and data analytics platforms and contributed as an author to the resulting research papers.	

Freelance Developer, AI/ML-enabled Full Stack Projects	Feb 2025 – Present
• Delivered 3+ full-stack web applications for clients using React.js, Tailwind CSS, Node.Js , Supabase.	
• Reduced delivery time by 60% using Agile methodologies and automation with GitHub Actions and CI/CD and advanced & trending AI Tools.	
• Implemented multilingual support and SEO best practices, GenAI Support and Knowledge Base Chatbots.	

Projects

StreeSaathi Mobile App	Live-Soon
<ul style="list-style-type: none">Developed and delivered a E-Commerce mobile application as a MVP for both iOS & Android, implementing core features such as user authentication, product management, Creating Supply Chain and secure payment integration.Technologies Used: Dart, Flutter, Node.js, TypeScript.	
AI-Based Telemedicine Web App for Skin Disease Detection	Demo Video
<ul style="list-style-type: none">Designed a full-stack responsive web app for real-time skin disease diagnosis using Django, HTML, and CSS.Integrated CNN model using TensorFlow and Razorpay API for payment processing.Achieved 30% faster diagnosis cycle and 96.7% model accuracy in test cases.	
Agri-Commerce Platform with AI-Powered Crop Diagnosis	Demo Video
<ul style="list-style-type: none">Built a multilingual e-commerce platform integrating React frontend and Django backend for farmers.Implemented AI-based crop disease detection using TensorFlow and a voice chatbot using HuggingFace.Increased local engagement by enabling support in 3 regional languages.	
Smart Water Purifier Monitoring Web Dashboard	In Progress
<ul style="list-style-type: none">Designed a dashboard to monitor an AI-based multi-chambered filtration system in real time.Developed front-end with React.js and charting libraries, backend using Node.js and MongoDB.Enabled alert systems for TDS/pH variations using WebSocket.	
AI-Powered Smart Calculator (AI Mathematician)	Live
<ul style="list-style-type: none">Created a web-based interactive math calculator using TypeScript, React.js, and Tailwind CSS.Added dynamic expression rendering and hint-based problem solving for students.Used OpenAI API for suggestion-based solutions in real time.	

Publications

AI-Driven Knowledge Graphs for Interoperable Digital Ecosystems - Accepted in ACIS 2025	April 2025
AI Tongue Diagnosis: Expert System with LLMs for Abdominal Disease Detection through Mobile App - Published	June 2025
A Comparative Analysis of Artificial Intelligence and Business Intelligence using Big Data Analytics - Published	April 2025
Cloud Based Automated Control System Workshops and Rooms for Controlling Parameters - Published	April 2025
Hi-Tech Waste Segregator - Patented	May 2024
Multi-Chambered Filtration System - Patented	October 2024

Achievements

(Awards)

Won 2× National Hackathon

Won 6× Inter-universities Hackathons

6+ Research Papers & 3+ Patents Published

Led 5+ tech events as IEEE SB Executive

Student of the Year: Inter-School State level Sahodaya 2022

Sports & Other curricular activities: 20+ Medals & 15+ Awards including State level