

Umesh Kumar Yadav

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portfolio webapp

EDUCATION

- **Goel Institute of Technology and Management** Lucknow, Uttar Pradesh, India
B.Tech in Information Technology, CGPA: 7.6
Oct 2021 – July 2025 Completed

EXPERIENCE

- **Software Development Engineer Intern** Jan 2025 – July 2025
GoRoots (Remote)
 - Developed responsive and reusable UI components using React and TypeScript, enhancing user engagement and reducing load time by 30%.
 - Engineered scalable backend APIs with Node.js and MongoDB to handle bookings, appointments, and reviews, cutting response latency by 25%.
 - Incorporated BigCalendar in the admin dashboard for real-time appointment tracking and management, improving scheduling efficiency by 35%.
 - Constructed a complete booking workflow with robust validation, availability checks, and appointment logic, handling 500+ bookings/week with 99.9% accuracy.
 - Rolled out a review module with secure input handling and protected routes to gather user feedback effectively, increasing review submissions by 40%.

PROJECTS

- **3d-mvs-webapp: 3D Model Viewer and Sharing Platform:** Designed an interactive web interface for 3D model visualization and sharing. Tech: React.js, Three.js, Node.js, MongoDB, Tailwind CSS. Link
 - **3D Rendering:** Leveraged Three.js to provide model rotation, lighting, and texture features in real-time.
 - **Model Upload & Storage:** Facilitated model uploads (.glb, .gltf) with metadata in MongoDB; ensured secure access.
 - **Sharing Mechanism:** Enabled sharing through unique public/private links with embedded viewer access.
 - **Performance Optimization:** Minimized latency with asset compression and component lazy loading.
 - **Responsive UI:** Delivered seamless cross-device experience using Tailwind CSS.
- **Energy Optimization Platform:** Created a tool to reduce electricity bills by optimizing solar power usage based on real-time tariff data. Built with Next.js, TypeScript, Tailwind CSS, Clerk, Mongoose, and MongoDB. Link
 - **Tariff Monitoring:** Developed a live tracking interface with predictive analytics for price forecasting.
 - **Analytics:** Extracted actionable insights from real-time and historical consumption data.
 - **Scheduling:** Automated appliance operation aligned with favorable tariff intervals.
- **Rule Engine with AST (Abstract Syntax Tree):** Constructed a rules engine for eligibility verification using AST for customizable logic creation. Used Node.js, Express, MongoDB, Tailwind, Lucide, Axios, and Clerk. Link
 - **Authentication:** Employed Clerk for secure sessions, enhancing login experience and performance.
 - **AST-Based Evaluation:** Enabled structured, scalable rule evaluation via AST node parsing.

SKILLS

- **Programming Languages:** JavaScript, TypeScript, Python, C++
- **Frameworks & Tools:** React, Next.js, Node.js, Express, REST APIs, Git, Docker, Postman, Playwright
- **Databases:** PostgreSQL, MySQL, MongoDB, Redis
- **Operating Systems:** Unix/Linux (shell scripting, system navigation)
- **Core CS Fundamentals:** Data Structures & Algorithms, OOP, DBMS, Operating Systems
- **Professional Capabilities:** Software development, testing/debugging, troubleshooting, documentation, on-call/production support, project/time management

ACHIEVEMENTS

- **Broad Coding Practice:** Solved over **500+ problems** across various competitive programming platforms.
- **Leetcode:** Solved **300+ problems**; achieved a rating of **1409**. View Profile
- **Codechef:** Secured a **2-star** rating with a peak score of **1497**. View Profile
 - * **Starters 170:** Achieved a global position of **281** after completing all contest problems.
 - * **Starters 199:** Placed **82** worldwide by solving all tasks within the time limit.
- **Luminous Techno-X Hackathon:** Placed in the **Top 86** out of **1 lakh teams** from across the country.