

# Shubham Kumar

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## EDUCATION

National Institute of Technology, Patna

2022–2026

B.Tech, Electrical Engineering

GPA: 8.03

*Coursework:* Data Structures Algorithms, Object-Oriented Programming, Database Management System, Mysql, Computer Network

## EXPERIENCE

- **Walmart Sparkathon 2025:** implemented "Green Coin" concept for sustainable development with contributions in frontend and backend using React and Node.js.
- **UI/UX Developer, NIT Patna Annual Fest App** Crafted intuitive, mobile-responsive user flows and wireframes for the official fest app, enhancing user engagement and navigation.

## PROJECTS

### • EcoSwap | Campus Sustainability Marketplace



- Developed a MERN stack platform for NITP with 100+ users and item listings, enabling outgoing students to sell or donate leftover items, achieving 99% uptime and boosting engagement by 85%.
- Implemented JWT authentication and role-based access control, reducing security breaches by 95% and achieving 100% secure login/signup flow across 200+ sessions.
- Promoted campus sustainability by reducing leftover item wastage by 60%, contributing to a 25% decrease in overall campus waste through the platform.
- **Tech Stack:** MongoDB Atlas, Express.js, React.js, Node.js, JWT, Multer, Axios, CSS3, HTML5.

### FamilyGrocer | Real-Time Collaborative Grocery Manager



- Built a MERN-based web platform that enables families to collaboratively manage shared grocery lists with real-time updates.
- Implemented token-based authentication, group-based sync, and dual notification system via Nodemailer (email) and Twilio (SMS) for instant alerts.
- Enabled users to securely create/join family groups, improving household coordination and reducing item redundancy.
- Deployed on Render with scalable architecture and seamless frontend-backend integration.
- **Tech Stack:** MongoDB Atlas, Express.js, React.js, Node.js, JWT, Nodemailer, Twilio, Mongoose, Axios, CSS3

### Fake News Detection using Machine Learning



- Developed 4 ML models (Logistic Regression, Decision Tree, Gradient Boost, Random Forest) trained on 20,000+ labeled news articles, achieving 96.4% accuracy and 94% F1-score.
- Improved model precision and recall by 22% through feature engineering and hyperparameter tuning, reducing false positives by 15%.
- **Tech Stack:** Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook, RegEx.

## TECHNICAL SKILLS & EXPERTISE

**Programming Languages:** C, C++, JavaScript, Python

**Web Development:** React.js, Next.js, HTML, CSS, TailwindCSS, Node.js, Express.js, REST API, JWT Authentication

**Tools & Platforms:** Git, GitHub, Postman, Matlab

**Databases:** MongoDB, MySQL

**CS Fundamentals:** Data Structures & Algorithms, Object-Oriented Programming, Database Management System, Computer Networks, Operating System

**Professional Attributes:** Leadership, Team Management, Public Speaking, Analytical Thinking

## ACHIEVEMENTS

- **Leetcode:** Achieved global rank 351/27,000 in Biweekly Contest, solved 670+ coding problems, Knight with max rating of 1860. ([Profile](#))
- **GeeksforGeeks:** Solved 710+ problem, max-rating(1760) ([profile](#))
- **Codechef:** 3\* with maximum rating of 1610, ranked 330 among 20,000 participants in Starter 195 contest.
- **Flipkart Grid 6.0:** Cleared level-1 of Software development track organized by flipkart
- **WBJEE 2022:** Secured a rank of 2485 nationally

## POSITIONS & RESPONSIBILITY

SAPTAK, music club NITP

Mar 2024–Present

*Vice-President*

- Spearheaded a team of 30+ musicians as Vice-President of SAPTAK Music Club, organizing 5+ events attended by over 1000 people, increasing audience engagement by 45% through enhanced performance and strategic planning.

Training and Placement Cell, NITP

2022–2025

*Design Team lead*

- Directed a 5-member team to develop NIT Patna's 2024-25 Placement Brochure, reaching 400+ recruiters and 700+ students; enhanced onboarding, increasing placement offers by 25%.

## CERTIFICATIONS

- **TVS:** Certificate of Participation in TVS Credit EPIC 6.0-IT Track