Sayan Paul

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Kolkata, West Bengal, India

PROFESSIONAL SUMMARY

- **Cross-Domain Engineer**: ECE student who independently mastered Data Science & ML through 250+ hours of self-study while maintaining core electronics curriculum

- **Production-Ready Builder**: Developed 3 end-to-end ML applications with deployment pipelines, API integration, and real-time data processing—solving problems in sports analytics, weather forecasting, and financial systems

- **Results-Driven**: Achieved 3rd place in college hackathon; led 2 project teams (8+ members) to successful completion; organized 5+ technical events reaching 200+ students

EDUCATION

Bachelor of Technology in Electronics & Communication Engineering — Expected May 2027

Maulana Abul Kalam Azad University of Technology (MAKAUT) — *Kolkata, West Bengal*

- CGPA: 7.49/10.0 (Balanced with 250+ hours of external Data Science learning) — ECE Coursework: Signal Processing, Circuit Analysis, Communication Systems, Electromagnetics
- **Self-Directed Data Science Mastery**: Independently acquired Python, ML frameworks, database design, and web deployment skills through Coursera, Udemy, project-based learning, and technical documentation

TECHNICAL SKILLS

Programming Languages: Python, C, SQL, HTML, CSS, JavaScript
Data Science & ML: Pandas, NumPy, Scikit-learn (Random Forest, Logistic Regression), Matplotlib, Seaborn, Plotly
Tools & Technologies: Git/GitHub, Flask, MySQL, SQLite, Jupyter, VS Code, REST APIs, Environment Management
Domain Expertise: Signal Processing, Systems Analysis, Electronics Fundamentals, Statistical Modeling, Feature Engineering
Currently Learning: TensorFlow, PyTorch, Cloud Deployment (AWS/GCP), LeetCode DSA (50+ problems solved)

PROJECTS

IPL Prediction Engine | *Python, Flask, Scikit-learn, Pandas, TailwindCSS* GitHub

- Built production-grade ML web application predicting IPL match outcomes using Logistic Regression trained on 150,000+ ball-by-ball historical records, achieving 73% prediction accuracy across 200+ test matches
- Engineered 15+ features from raw delivery data including strike rates, wicket patterns, venue-specific performance, and head-to-head records to capture team strength dynamics
- Designed modular architecture with separate training and inference pipelines; deployed Flask REST API serving real-time predictions with ¡500ms response time
- **Real-World Impact**: Enables fans to make data-driven predictions; simulates full tournament outcomes with dynamic standings and playoff scenarios

Weather Forecast Predictor for Kolkata | *Python, Random Forest, Plotly, OpenWeatherMap API* GitHub

- Developed 7-day multi-variable weather forecasting system predicting max/min temperature and humidity using Random Forest Regression on 3+ years of historical climate data, achieving RMSE of 1.8°C
- Integrated live OpenWeatherMap API for real-time data injection; implemented secure credential management using environment variables and automated daily model retraining pipeline
- Created interactive Plotly dashboard with confidence intervals and historical comparison, processing 25,000+ data points for visualization
- **Real-World Impact**: Assists local residents and businesses in planning around Kolkata's unpredictable monsoon patterns with higher accuracy than generic national forecasts

Command-Line Banking System | *Python, SQLite, OOP, SHA-256 Hashing* GitHub

- Engineered secure banking management system handling 500+ concurrent accounts with atomic transaction processing, PIN authentication using SHA-256 hashing, and persistent SQLite storage

- Implemented object-oriented design with 8 classes ensuring clean separation of concerns; achieved 100% transaction integrity through database ACID compliance
- Built administrative analytics dashboard aggregating branch-level performance metrics and real-time fund tracking across multiple accounts
- **Real-World Impact**: Demonstrates production-ready financial software principles including security, auditability, and regulatory compliance frameworks

Leadership & Impact

Project Team Lead (2 teams, 8+ members total): Coordinated project deliverables, sprint planning, and code reviews during 3-month Data Science course; achieved 100% on-time delivery with zero blockers escalated

Event Organizer: Hosted Smart India Hackathon internal round (150+ participants), club opening ceremonies, and 3 technical workshops reaching 200+ students; managed logistics, judge coordination, and sponsorship outreach

Campus Ambassador, KSHITIJ Program: Drove student engagement in technical competitions; recruited 30+ participants to join our programs

JIS Debate & Literacy Club Member: Contributed to organizational planning for literary events and inter-college competitions

Certifications & Achievements

3rd Place, College Hackathon — Built real-time anomaly detection system in 24 hours; judged on innovation and technical execution

Data Science with Python, 3-Month Intensive Program — Completed 120+ hours of hands-on training covering ML algorithms, statistical analysis, and deployment; led 2 capstone projects

Generative AI Workshop, Upskill (8 Hours) — Gained foundational knowledge in LLMs, prompt engineering, and AI ethics

Hackathon Participation — Competed in 5+ national/international hackathons including Smart India Hackathon qualifiers

Additional Information

Languages: English (fluent), Bengali (native), Hindi (fluent) | **Interests**: Competitive chess (1000+ rating), open-source contribution, data storytelling