

RAJAT PATRA

☎ +91-7327047778 ✉ rajatkk.patra@gmail.com 🌐 github.com/RawJat 🔗 linkedin.com/in/patrarajat

EDUCATION

- **Bachelor of Technology in Computer Science and Engineering** 2022-2026
Siksha 'O' Anusandhan University, Bhubaneswar CGPA: 8.36

PROJECTS

- **Cricket Fantasy XI Predictor | Python, XGBoost, PuLP, Docker**
 - Developed an **AI/ML-based predictive model** to optimize fantasy cricket team selection for the *Indian Premier League 2025*, leveraging historical player data, pitch conditions, and weather to maximize fantasy points across 15+ matches.
 - Implemented **Gradient Boosted Regressor** and constraint optimization algorithms using PuLP to ensure adherence to fantasy sports rules, including a 100-credit budget and team composition constraints.
 - Processed and analyzed large-scale cricket ball-by-ball datasets from Cricsheet, Kaggle, and ESPNcricinfo, performing **feature engineering** to create batting and bowling feature sets for player performance prediction.
- **Envault | Next.js 14, Supabase, Redis, AES-256-GCM, Tailwind CSS**
 - Architected a zero-knowledge vault using envelope encryption (AES-256-GCM) with a master/data key hierarchy and automatic rotation. Optimized decryption performance via Redis caching and enforced database security using Supabase RLS and immutable audit logs.
 - Developed a CLI for secret synchronization, engineering automated safeguards like git-tracked file blocking and pre-commit hooks to prevent credential leaks. Implemented the RBAC and Just-in-Time (JIT) GitHub integration to dynamically provision access to repository collaborators.
- **AI Generated Image Classification | PyTorch, Torchvision, scikit-learn, imbalanced-learn, Matplotlib**
 - Worked on a **Vision Transformer (ViT-B/16)** model fine-tuned on the CIFAKE dataset (100k+ images) to classify real vs **AI-generated images**.
 - Achieved **98.5%** accuracy and a **98.2%** F1-score in the standard test set and maintained robustness against adversarial examples.
 - Optimized training with **GPU acceleration (CUDA)**, reducing training time by **85%**.
- **HealSync | Python, Figma, Adobe**
 - Designed the application interface using **Figma** and **Adobe Photoshop**, which was later developed in **Android Studio**.
 - Built an **RFID-based system** in Python to track hospital facilities availability in real time.
 - Integrated **Google Maps API** to discover nearby hospital facilities to users.

FREELANCE EXPERIENCE

- **Ekaayam | Nodejs, React, Flask, Firebase API, Razorpay API**
 - Engineered a **ticketing platform** that reduces manual booking effort by **70%**, enabling seamless booking options.
 - Redesigned and optimized the website to align with the brand identity, resulting in a **79%** increase in website clicks.

TECHNICAL SKILLS

Programming Java, Python, C, C++, VHDL

Development HTML, CSS, JavaScript, Typescript, React, NextJs, Tailwind, MySQL, PostgreSQL, Supabase

Data Science Numpy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Statsmodels, Keras, PyTorch

Other tools Kaggle, Git, Jupyter, Figma, Canva, Adobe Photoshop

POSITIONS OF RESPONSIBILITY

- **Google Developer Student Club**
 - Organised and managed the backend operations for **Techwiz 2024**, an event presented by **Coding Ninjas** and **GDG ITER**, attended by **200+** students.
 - Served as a key anchor for the **Google Solution Challenge 2025**, along with Google Tech Winter Break.

ACADEMIC ACHIEVEMENTS

- Secured **First Prize (Rs. 10 Lakhs)** in *Dream11 Gameathon 2.0*, competing against 40+ teams from Tier-1 universities across India, as part of a Rs. 25 Lakh prize pool.
- Finished **7th** in Pravaah ML Hackathon, organized by IIT Bhubaneswar.
- Achieved **1st Rank** in the Science Olympiad organized by the Science Olympiad Foundation and also qualified for the state level.
- Qualified in **the internals of the Smart India Hackathon 2024** conducted by the college with a rank of **11** out of 800+ participants.