

RAJARSHI DATTA

AI & ML Developer | Software Developer
rayan05rio@gmail.com | +91 9163148385 | Portfolio
GitHub | Kaggle | LinkedIn | Leetcode | Codeforces

TECHNICAL SKILLS

- **Languages:** C, Python, Java, JavaScript, SQL
- **Web & Backend:** Node.js, Express.js, FastAPI, Flask
- **Databases & Cloud:** PostgreSQL, MongoDB, Neo4j, AWS, Google Cloud Platform, Auto-Scaling, Load Balancing
- **APIs & Services:** REST APIs, GraphQL, WebSockets
- **Systems & Tools:** Git, Docker, Linux, Postman, Debugging Tools, CI/CD (GitHub Actions, Jenkins)
- **AI / ML:** Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Transformers, LangChain
- **Core CS:** Data Structures & Algorithms, DBMS, Operating Systems, Computer Networks, SDLC, Object-Oriented Design
- **UI/UX:** Dashboard Design, Responsive Web Design, Improved User Experience
- **Software Engineering Practices:** Agile (Scrum), Test-Driven Development (TDD), Pair Programming, Code Reviews, Continuous Integration, Continuous Delivery
- **Architecture & Design:** Microservices, Modular Architecture, Design Patterns (Factory, Singleton, MVC), Clean Code Principles, SOLID Principles

PROFESSIONAL EXPERIENCE

CodeMate AI - Software Development Engineering Intern

Remote

Jul 2025 – Sept 2025

- Developed core features of the education platform (edu.codemate.ai) using **Node.js** and **Next.js**, improving API response time by 30% through optimized request handling and efficient data pipelines.
- Implemented unit tests and integration tests across services, improving reliability and reducing regression defects by 25%.
- Participated in Agile sprints, daily standups, and collaborative design discussions, ensuring seamless integration across cross-functional engineering teams.

PlodFlow - Machine Learning Intern

Bangalore, Karnataka

May 2025 – Jun 2025

- Streamlined data preprocessing using Pandas and NumPy, optimizing feature engineering pipelines by 40% while ensuring robust error handling and logging.
- Engineered an NLP pipeline to scrape and analyze social media data using semantic similarity techniques, applying best practices in testing and validation to ensure reliability.
- Collaborated with data engineering and backend teams to ensure scalable ingestion, transformation, and deployment of ML components.

PROJECTS

• QuicklearnAI — Full-Stack AI-Powered Learning Platform (quicklearn.ai.in)

- Built a scalable ed-tech platform with **React**, **Node.js/Express**, **MongoDB**, supporting 500+ concurrent students with AI-powered quiz generation and video summarization. Implemented unit and integration tests using Jest and PyTest, achieving 90% coverage.
- Designed and deployed **Python Flask microservices** with **LangChain + Google Generative AI** for intelligent search, content extraction, and chat-based learning. Emphasized debugging, error handling, and maintainability.
- Applied clean architecture principles and implemented asynchronous task queues for scalable video processing and AI workloads.
- Optimized backend service resilience with retry logic, caching layers, and structured logging to ensure production readiness.

• OSINTHub — AI-Powered Open Source Intelligence Platform (osinthub-delta.vercel.app)

- Developed an advanced **Open Source Intelligence (OSINT)** aggregation and analysis platform combining AI-driven data collection, visualization, and threat intelligence. Built end-to-end using **React**, **FastAPI**, and **Neo4j**.
- Implemented a **graph-based intelligence layer** using **Neo4j** to visualize entity relationships, enabling deeper network-level situational awareness.
- Integrated automated deployment pipelines using GitHub Actions, enabling seamless CI/CD with linting, testing, and build automation.
- Enhanced API performance and resilience through caching, pagination, optimized queries, and robust exception handling.

ACHIEVEMENTS

- **Winner** – Hackzion v2 (National Hackathon), AMCEC, Bangalore
- **Winner** – Ideathon 6.0 (National Level), NMIT, Bangalore
- Design Lead – Google Developer Groups BIT, Bangalore: Organized amBITion hackathon, led HacktoberFest with 1000+ contributors - leading to 200+ merged PRs.
- Technical Team – TFUG Hyderabad: Maintains deep learning codebase and authors technical content.

CERTIFICATIONS

- Oracle Cloud Infrastructure 2025 Certified Generative AI Professional
- Data Science, ML, DL & NLP Bootcamp – Krish Naik - *Udemy*

- Data Scientist Job Simulation - Llyods Banking Group - *Link*
- Intro to AI with Python – Harvard University (CS50AI) - *Link*
- 5-star Python – HackerRank - *Link*
- Google Data Analytics & ML Courses - *Link*

EDUCATION

Bangalore Institute of Technology

B.E. in Information Technology, SGPA – 8.5/10 (upto 4th sem)

Bangalore, Karnataka

Aug 2023 – Aug 2027

Delhi Public School, Ruby Park

Senior Secondary – 87.0%

Kolkata, West Bengal

Jun 2021 – Mar 2023