RITANKAR JANA

Kolkata, West Bengal, India

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Software developer passionate about building scalable backend systems and AI-powered solutions. Skilled in developing APIs, optimizing databases, and integrating machine learning to solve real-world problems. Driven by clean code, innovation, and continuous learning to deliver impactful, future-ready technologies.

Education

Academy of Technology	**2021 – 2025**
Bachelor of Technology in Computer Science (CGPA: 8.92/10)	*Hooghly, West Bengal*
W.W.A Cossipore English School	**2018 – 2020**
I.S.C (Percentage: 89.50%)	*Kolkata, West Bengal*
W.W.A Cossipore English School	**2018**
I.C.S.E (Percentage: 90.75%)	*Kolkata, West Bengal*

Experience

Soefia Education Incorporated — **Jul 2025 – Aug 2025**
Software Support Engineer (Intern) — *Boston, Massachusetts, USA (Remote)*

- Deployed a **multi-tenant architecture** on **AWS (ECS, S3, Amplify, Secrets Manager)**, improving scalability and ensuring secure credential management for 500+ users.
- Enhanced **backend reliability** by identifying and resolving edge cases in **authentication APIs**, validated with rigorous **pytest unit tests**, reducing potential authentication failures by ∼30%.
- Improved **product quality** by conducting **functional testing** and systematically reporting bugs, cutting defect resolution cycle time by 20%.

Projects

Stokis - Stock Trends Outlook using Key Indicators and Sentiment
Python, FastAPI, CrewAI, MongoDB, Transformer Code Link — **Oct 2024 – May 2025**

- Led a **5-member team** in building an advanced stock prediction platform using **Yahoo Finance historical data**, integrating technical indicators with a **CNN-BiLSTM model** that achieved an **R^2 value of 0.95**, ensuring highly accurate price forecasts.
- Individually fine-tuned a **BERT-based model (FinBERT)** on a custom Hugging Face dataset, attaining **97.2% accuracy** in sentiment classification of financial news, boosting prediction reliability.
- Developed a **FastAPI microservice** for real-time stock news analysis, automating fetch, filter, and summarization tasks using **SerpAPI, Playwright, CrewAI, and MongoDB**, reducing manual data collection time by 60%.

GadgyHub Application *React, Node.js, Express, MongoDB, Redis, TailwindCSS* Code Link — **Jan 2025**

- Engineered a scalable e-commerce platform with **Redis caching**, **Cloudinary image management**, and **Stripe payment integration**, ensuring secure and efficient transactions for 1k+ users.
- Delivered an engaging and responsive UI using **React + TailwindCSS**, enhancing user retention by 25%; integrated **Zustand** for state management, and animations with **Framer Motion** and **React Confetti** to boost user engagement.
- Designed and validated **RESTful APIs** (authentication, products, cart, payments) with **Postman and MongoDB Compass**, optimizing API response time by 35%.

TriNayan: AI-Powered Currency Detection *YOLOv8, ViT, OpenCV* Code Link — **Jun 2024 – Sept 2024**

- Designed an assistive AI solution for the visually impaired using **YOLOv8** and **Vision Transformers (ViT)**, achieving **70% accuracy** in currency note recognition.
- Enhanced system reliability by 75% through real-time annotated image delivery with **OpenCV and Python**, significantly improving user independence and trust in the solution.

Technical Skills and Interests

Languages: Java, Python, Javascript, BashScript
Database: MySQL, Oracle, MongoDB, Redis
OS: Windows, Linux
ML/DL Libraries: Scikit-Learn, Pandas, Matplotlib, LangChain, NumPy
Web Frameworks: Node.js, Express, React
Cloud(AWS): ECS, S3, EC2, Amplify

Extracurricular Activities and Achievements

AWS Cloud Quest Cloud Practioner	Jun 2025 - Jul, 2025
Participated in HaRBInger 2024- RBI Hackathon	May 2024 – Oct 2024
Talent Next Java Certification from Wipro	May 2024 – Sept 2024
Open-source Contributions in Hugging Face	2024