Sudipta Bag

⚲ Chennai, Tamil Nadu ✉ bububag2@gmail.com ☎ 9896599448 in Sudipta Bag ⊙ sudiptabag2004

Education

SRM Institute Of Science and Technology *Sept 2022 – present*
B.Tech. in Computer Science and Engineering
- GPA: 8.7/10
- **Coursework:** Data Structures and Algorithms, Operating Systems, DBMS, Computational Theory, Computer Architecture

Skills

Languages: C++, Python, SQL
Frameworks & Libraries: React, Next.js, Flask, TailwindCSS, TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas
Tools & Platforms: Git, Docker, Jenkins, AWS, Firebase, DynamoDB, MySQL
Core Skills: Full Stack Development, Deep Learning, Data Analysis, Team Leadership, Communication

Experience

Data Science Intern *June 2025 – July 2025*
Indian Oil Corporation Limited, Panipat, Haryana
- Designed a machine learning-based NIDS using the UNSW-NB15 dataset (89.5% accuracy, 0.97 ROC-AUC).
- Built an MLP with Focal Loss and dropout to improve threat detection on imbalanced traffic data.
- Released an interface using Streamlit to visualize and monitor threats in real-time CSV-based data.

Research Intern *May 2024 – June 2024*
IIT Jodhpur, Rajasthan, India
- Collected real-time sensor data and trained a regression model for health monitoring.
- Implemented the model on Raspberry Pi for on-device predictions and alerts.
- Launched a cloud-based patient-doctor portal using AWS EC2 and DynamoDB.

Technical Team Member *Aug 2023 – Jun 2024*
SRM Team Robocon, Chennai, Tamil Nadu
- Maintained and developed the official website for SRM's robotics club, Team Robocon.
- Used Next.js, React.js, and Tailwind CSS to build responsive, modular web components.
- Ensured regular updates and streamlined deployment to improve outreach.

Projects

NptelOverflow – NPTEL Discussion & Resource Hub *project*
- Built a platform for NPTEL learners to post, upvote, and discuss course-related queries.
- Added features like user authentication, forums, blogs, notes, and a leaderboard to boost engagement.
- Used Next.js, Firebase Auth, Firestore, and Tailwind CSS; built scraper for course metadata.

CapitalCue – AI Branch Manager *project*
- Built a web platform simulating a bank branch with AI video assistant and rule-based loan approval.
- Added OCR for document parsing (Aadhaar, PAN, income, bank statements) with instant eligibility checks.
- Integrated an AI chat assistant available 24/7 to handle user queries related to the loan process.

Achievements

- **1st Place – Standard Chartered Finance & Technology Connect** (Mar 2025)
  Won the Standard Chartered Hackathon at SRM Institute of Technology for CapitalCue.
- **1st Place – AIoT Project Expo** (Jan 2025)
  Secured top position for innovative robot for weed extermination.
- **Runner-up – Mahakumbh 2025 Hackathon** (Mar 2024)
  Presented AI-based crowd optimization solution under the theme of Security, Surveillance, and Mobility.

Certifications

Oracle Cloud Infrastructure 2024 Certified Foundations Associate *Oracle* *Feb 2025*
Credential ID: 101261232OCI2024FNDCFA
AI Specialist *Salesforce* *Jan 2025*
Credential ID: 5695954, sforce.co/verifycerts