SOUPARNA PAUL

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Kolkata, India

OBJECTIVE

A Tech Enthusiast and Innovator specializing in Python development, AI/ML, and full-stack web development. Seeking to contribute to innovative projects at the intersection of real-time data analysis and robust web solutions, leveraging expertise in building impactful applications and applying machine learning to real-world problems.

EDUCATION

- **Narula Institute of Technology** — *2021 - 2025*
  B.Tech in Computer Science and Engineering — Kolkata, India
  ◦ Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Machine Learning, Web Technologies.
  ◦ Thesis/Capstone Project: Phishing URL Detection (Awarded Best Paper).

- **Madhyamgram High School** — *2019*
  Higher Secondary Education — Madhyamgram, India
  ◦ Specialized in Science Stream.

- **Barasat Mahatma Gandhi Memorial High School** — *2017*
  Secondary Education — Barasat, India
  ◦ Completed Secondary Education.

PROJECTS

- **Individual Projects**

- **Python Syllabus Website** — *2024*
  HTML, CSS, JavaScript — [] []
  ◦ Developed an interactive and comprehensive Python syllabus website to guide beginners through core concepts, from basic syntax to advanced topics like OOP and data structures.
  ◦ Features structured curriculum, interactive code examples, and a user-friendly interface for easy navigation and self-paced learning.

- **BTC Probo Predictor (Mobile Friendly)** — *July 2025*
  Python, Streamlit, Plotly, Pandas, Binance API — [] []
  ◦ Created an AI-powered mobile-optimized application providing predictions for Probo BTC events, leveraging real-time market data and technical analysis.
  ◦ Features real-time data fetching from Binance API, technical indicator analysis (RSI, EMA), sentiment analysis, an AI-powered prediction engine, interactive Plotly charts, and Telegram notifications.

- **Smart AgriTech Dashboard** — *June 2025*
  Python, Streamlit, TensorFlow, Firebase, Plotly — [] []
  ◦ Developed a unified AI-powered AgriTech dashboard for real-time crop monitoring, sensor visualization, and crop advisory.
  ◦ Integrated Firebase Realtime Database for live farm sensor data, trained a TimeDistributed ANN (TDANN) for soil moisture prediction, and provided AI-based growth forecasts tailored to 20+ Indian crops.

- **MATHEMATICO - Special Mathematics Coaching Website** — *July 2025*
  HTML, CSS, JavaScript, Tailwind CSS, Firebase — [] []
  ◦ Designed a comprehensive, responsive website for a mathematics coaching center with dynamic content management via Firebase Firestore for admin-controlled updates.
  ◦ Includes admin panel with secure Firebase authentication, CRUD operations for content, dynamic FAQ, testimonials, Google Maps integration, and a theme toggle for optimal user experience.

- **Tournament Manager Full-Stack Web Application** — *May 2025*
  React.js, Node.js, Express.js, MongoDB — [] []
  ◦ Developed a full-stack web application for managing diverse tournaments (e.g., Cricket, Football) with team registration, automated match scheduling, real-time score updates, and dynamic leaderboard tracking.
  ◦ Features a user-friendly React.js frontend and a robust Node.js/Express.js backend with MongoDB for seamless data management and real-time responsiveness.

- **My Personal Portfolio Website** — *2024 (Ongoing)*
  HTML, CSS, Tailwind CSS, JavaScript — [] []

- Meticulously designed and developed a personal portfolio showcasing skills, projects, and educational background, focusing on modern web standards and intuitive user experience.
- Features a dynamic dark/light mode toggle, smooth scrolling navigation, animated section reveals, and an integrated contact form, demonstrating proficiency in front-end development and responsive styling.

- **Dream11 AI Team Predictor** *2024*
Python, Streamlit, Pandas, Machine Learning [O] [□]
  - Built an AI-powered web application for predicting optimal fantasy cricket teams (e.g., Dream11), allowing users to leverage an integrated AI model for winning team combinations.
  - Incorporates real-time data fetching for player statistics, a sophisticated predictive engine based on historical performance, and a user-friendly Streamlit interface for data-driven decisions.

- **Team Projects**

- **Early Detection of Parkinson's Disease Using ML** *2023*
Python, Scikit-learn, Pandas, Machine Learning [O]
  - Collaborative effort of a 6-member team focused on early detection of Parkinson's Disease using machine learning.
  - Contributed to resource gathering, programming code development, team management, presentation design, and research paper writing.

- **Employee Management System Website** *Jan 2024 - June 2024*
Node.js, React.js, Firebase Firestore, HTML, CSS [O] [□]
  - Developed a comprehensive Employee Management System Website with a 6-member team.
  - Roles included resource gathering, research on best practices, full-stack development using Node.js, React.js, and Firebase Firestore, and deployment.

- **Phishing URL Detection Using Machine Learning** *2024*
Python, TensorFlow, Scikit-learn, Machine Learning
  - Team project focused on applying machine learning to real-world problems for phishing URL detection.
  - Project was recognized with a **Best Paper Award** at the 2nd National Conference, RAICCIT 2025.

PUBLICATIONS   C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

[**C.1**]   Souparna Paul, et al. (2025). **Phishing URL Detection Using Machine Learning**. In *Proceedings of the 2nd National Conference, RAICCIT*.

SKILLS

- **Programming Languages:** Python, JavaScript, SQL, C, Java, C++
- **Web Development:** Streamlit, React, HTML, CSS, Render, Django
- **Data Science & ML:** Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Data Visualization, Statistical Analysis
- **Databases:** Firebase-FireStore, MongoDB, MySQL, SQLite
- **Tools & Platforms:** Jupyter Notebooks, VS Code, Colab, Power BI, Excel, GitHub
- **Soft Skills:** Problem-solving, Teamwork, Communication, Adaptability, Leadership, Ability To Learn

HONORS AND AWARDS

- **Best Paper Award** *2025*
2nd National Conference, RAICCIT
  - Recognized for the research paper "Phishing URL Detection Using ML."

- **SIH Internal 2023 Participation** *2023*
Smart India Hackathon, Narula Institute of Technology
  - Participated in the Smart India Hackathon (SIH) Internal competition on "Real-Time Vehicle Tracking System."

- **Singing Contest: NiT Jewels (2nd Place)** *April 2022*
Narula Institute of Technology
  - Secured 2nd place in the college singing contest.

ADDITIONAL INFORMATION

Languages: English (Professional Working Proficiency), Bengali (Native)
Interests: Writing Stories, Songwriting, Singing, Meditation