

Aritra Samanta

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Objective

Motivated MCA student with strong foundations in algorithms, data structures, and databases. Passionate about AI/ML, cybersecurity, and high-performance computing. Fast learner, problem-solver, and collaborative team player.

Education

- **Vellore Institute of Technology**, Vellore, Tamil Nadu (2024-2026)
Master of Computer Application, CGPA: 8.21 / 10
- **Techno India University**, Kolkata, West Bengal (2020-2023)
Bachelor of Computer Application, CGPA: 8.9 / 10
- **Kendriya Vidyalaya**, Ishapore, North 24 Pargana, West Bengal (2019)
Class 12: CBSE, 85%
Class 10: CBSE, CGPA: 8.8 / 10

Projects

- **MindShelf – A Personalized Content Curation Platform(Ongoing)** *MERN (React, Node.js, Express), MongoDB, Firebase Auth, Vercel*
 - Developed a full-stack MERN application for users to save, categorize, and manage online content like articles and videos through a responsive interface.
 - Architected a decoupled system with a Node.js REST API and implemented secure Google Sign-In using Firebase Authentication, deploying the final application to Vercel.
- **Real-Time ISL to Text Translator (Ongoing)** *Python, OpenCV, PyTorch, CNN/ViT, Deep Learning*
 - Designing a vision-based system to recognize Indian Sign Language (ISL) gestures via a laptop webcam and translate them into text using deep learning models.
 - Implementing CNNs and Vision Transformers with buffering and sequence modeling to achieve real-time, affordable, and accessible communication support.
- **Simulator App for ML-driven Multi-Agent Path Planning of IoRT-based AGV Swarm** *HTML, CSS, Script, IoT Cloud, ML*
 - Built an ML-driven simulator for IoRT-based AGV swarm path planning with multi-agent coordination, real-time obstacle avoidance, and adaptive rerouting.
 - Implemented dynamic task allocation and shortest-path algorithms on a 9x9 grid to optimize traffic flow and minimize collisions.
 - Integrated real-time monitoring, predictive analytics, and autonomous decision-making for efficient logistics in hospitals and smart warehouses.

Course Work

- **Advanced Java** • **Data Structures and Algorithms**
- **Machine Learning** • **Full Stack Development**
- **Database Management Systems** • **Cloud Computing**

Experience and Publication

- **Tescom**, Kolkata, West Bengal (Dec 2022 – Mar 2023) *Cloud Consultant Intern* [🔗 link](#)
 - Helped analyze and improve cloud systems to make them run more efficiently and cost-effectively.
 - Suggested better ways to use cloud services to improve performance and reliability.
 - Learned how to set up and manage cloud resources like storage, servers, and networking.
- **IFortis WorldWide**, Kolkata, West Bengal (May 2021 - July 2021) *Marketing & Sales Trainee* [🔗 link](#)
 - Learned how to create and manage sales funnels and helped bring 5 participants to the final program.
 - Got hands-on experience with marketing strategies, consumer behavior, and communication.
 - Made visuals and presentations for marketing campaigns.
- **IIT Kharagpur**, Kolkata, West Bengal (Dec 2020) *Entrepreneurship Awareness Drive* [🔗 link](#)
 - Completed a 2-day workshop on business development, startup funding, and market strategies.
 - Learned from 5+ industry experts about entrepreneurship, idea validation, and leadership.
 - Collaborated with 100+ participants in discussions on building and sustaining businesses.

Technical Skills

Languages: Python, C, C++, Java, Node js, HTML5, CSS, Javascript, JQuery, React js, MySQL, MongoDB.

Libraries: Pandas, NumPy, Scikit-Learn, Matplotlib, PyTorch, Transformers, Datasets, Optuna, Cuda Toolkit.

Software Tools: Google Colab, Photoshop, Filmora, Visual Studio Code, Spyder, Anaconda.

Concepts: Java MVC Framework, Networking using Java, Machine Learning, Reinforcement Learning.

Interests: Deep Learning, Photo Editing, Video Editing

Certifications

4th IEEE International Conference on Sensors and Related Networks (SENNET-2025) Special Focus on Digital Healthcare: [🔗 link](#)

SAP HANA Certificate: [🔗 link](#)

Full Stack Development: [🔗 link](#)

React js, Node js, MongoDB, Angular js, Angular

Reinforcement Learning: [🔗 link](#)

Algorithm learned: Bellman Equation, Value Iterations and Policy Iterations, Q learning, SARSA etc.

Others

Languages: English, Hindi, Bengali.