

Satadru Jati

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Summary

Computer Science undergraduate at the University of Engineering & Management (UEM), Kolkata, with a strong foundation in Machine Learning, AI, and Computer Vision. Eager to apply technical skills in software engineering and data-driven problem-solving. Possesses strong communication and teamwork abilities, with experience in collaborative international environments and technical content creation. Seeking to gain experience and knowledge in industrial projects and acquire further expertise in innovative technology fields.

Education

University of Engineering & Management (UEM), Kolkata <i>B.Tech in Computer Science</i> GPA: 8.58 / 10.0 Relevant Coursework: Object-Oriented Programming (Python/Java), Data Structures & Algorithms, AI/ML, Cloud Computing, Industrial ML	2022 – 2026
Techno India Group Public School <i>All India Senior School Certificate Examination (AISSCE), Computer Science</i>	2020 – 2022 Score: 84.6%
Techno India Group Public School <i>All India Secondary School Examination (AISSE)</i>	2009 – 2020 Score: 96.4%

Technical Skills

Languages	Python, Java, SQL, TypeScript, HTML5/CSS3
Frameworks	PyTorch, TensorFlow, React, Node.js, Express.js
Cloud	AWS (EC2, S3), Google Cloud Platform (GCP), Vercel, Git, CI/CD, Docker
Tools & Methods	Computer Vision (YOLO), Pytorch Tensorflow, Agile SDLC, Data Visualization, Roboflow, UE5

Experience

TAMSystem, Seoul, South Korea <i>Computer Vision & Industrial Machine Learning Intern</i>	May 2025 – July 2025 Seoul, South Korea
<ul style="list-style-type: none">Led a team to a successful Factory Acceptance Test (FAT) for a defect-detection project on multiple product lines for a major client, JUNG KWAN JANG.Managed core technical workflows, including image labeling, model testing, inference checking, and supporting the training pipeline.Acted as the primary liaison between the intern team and senior staff, ensuring project alignment and clear communication.Maintained project timelines through effective planning, communication, and consistent follow-through on deliverables.	
All India Council for Technical Education (AICTE) <i>Machine Learning Intern (In collaboration with Shell India)</i>	April 2025 Virtual
<ul style="list-style-type: none">Developed a Wind Power Generation Forecasting model for four geographic locations using Python and machine learning algorithms to address sustainability challenges in renewable energy.Analyzed historical weather and turbine data to optimize energy output predictions, enhancing grid efficiency for renewable systems.Presented findings via detailed reports and dashboards, providing actionable insights for reducing carbon footprints.	
Tutorialspoint <i>Web Content Writer</i>	Oct 2022 – Aug 2023 Remote
<ul style="list-style-type: none">Authored and published over 50 technical articles focusing on Data Structures, Algorithms, and Cloud Computing.Implemented SEO best practices to achieve first-page Google rankings for multiple articles within three months.View Published Work: tutorialspoint.com/authors/satadru-jati	

Projects

Disaster Risk Monitoring Using Satellite Imagery (NVIDIA DLI)

2025

Technologies: NVIDIA DALI, TAO Toolkit, Triton Inference Server, PyTorch

- Developed an end-to-end deep learning pipeline to classify satellite imagery for disaster assessment, focusing on identifying building damage and floods.
- Utilized NVIDIA DALI for GPU-accelerated data pre-processing and augmentation of high-resolution satellite images.
- Trained and fine-tuned a ResNet-18 classification model using the NVIDIA TAO Toolkit for transfer learning.
- Deployed the optimized model to a Triton Inference Server, enabling scalable, real-time inference for disaster response scenarios.

Toxicity Detection with Deep Learning

2024

Technologies: LSTM, GRU, BiRNN, Seq2Seq, Classification Project

- Curated a custom dataset with texts and label as safe or unsafe with different categories of toxicity.
- Built a deep learning system to classify text as safe or unsafe, achieving approximately 80% accuracy in detecting NSFW content.
- Implemented and compared multiple advanced NLP models (LSTM, BiRNN, Seq2Seq, GRU) to determine optimal performance for different toxicity levels.

Flight Price Prediction with ML System (XGBoost, Pandas)

2025

Technologies: BiLSTM, Matplotlib, BiRNN, XGBoost, regression Project

- Achieved 89% accuracy (RMSE: 1123.45) through hyperparameter tuning
- Engineered features & visualized trends using Matplotlib/Seaborn

Endless Runner using UE5 Game (Procedural Generation)

2023

Technologies: Unreal Engine 5, Unreal Engine Library Resources

- Developed infinite terrain system with optimized 60 FPS performance
- Created interactive menu systems & character controllers

Assessly – Automated Grading Platform

2025

Technologies: React, Node.js, Tailwind CSS, Typescript, Gemini AI

- Engineered an AI-powered grading system that reduced educator evaluation time by up to 85%.
- Implemented secure, single-use assignment links using cryptographic nonces and built tracking dashboards.
- Shortlisted for Hack4Bengal 2025 in recognition of its innovative impact.

Garura – Secure Interview Hosting Platform

2025

Technologies: Electron, NextJS, Typescript, Tailwind CSS, Windows Powershell

- The platform was made as a team project (4 teammates) with an aim to compete in Hack4Bengal 4.0 In-Person Hackathon.
- Developed a locked-down video interview environment that blocks blacklisted applications (e.g., Discord, OBS) to ensure integrity.
- Implemented hardware-level monitoring to instantly terminate sessions on PrintScreen attempts and wipe the clipboard periodically.
- Created a "three-strikes" policy for suspicious key usage and generated audit trail reports of running processes every 10 minutes.

Certifications

- **NVIDIA:** Disaster Risk Monitoring Using Satellite Imagery (Jul 2025)
- **Electronic Arts (Forage):** Product Management Job Simulation & Software Engineering Job Simulation
- **AWS (Forage):** APAC - Solutions Architecture Job Simulation
- **Google Cloud:** Store, Process, and Manage Data Skill Badge & Implement Load Balancing Skill Badge