

Niloy Deb Barma

niloydebbarma.com | github.com/niloydebbarma-code | linkedin.com/in/niloydebbarmacpscr

Education

Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, 2025–Expected 2029
Chennai, Tamil Nadu, India

- Bachelor of Technology (B.Tech) in Artificial Intelligence and Data Science

Skills

Languages: Python, JavaScript, Julia
AI & ML Frameworks: PyTorch, TensorFlow
Web & Cloud: FastAPI, React, Google Cloud

Experience

Developer (Contributor), AllyCat Project – AI Alliance (Meta, IBM, Global Community) Aug 2025 – Present

- Implemented and optimized raw RAG and GraphRAG systems for AI retrieval and reasoning tasks.

AI Data Analyst, Excelerate (Saint Louis University) – Remote Jul 2025 – Aug 2025

- Analyzed student data and developed visual dashboards for decision-making.

Cerebras Fellow, Cerebras Systems – Sunnyvale, CA, USA (Remote) Jan 2025 – Present

- Conducting research on AI performance optimization using high-end computing systems.

Founder, AI Youth Alliance – Bangladesh Mar 2024 – Present

- Founded and led global AI education initiatives; created platforms, models, datasets, workshops, and applications.

Artificial Intelligence Intern, Connecting Dreams Foundation – Remote, India Oct 2023 – Mar 2024

- Developed a diabetes prediction model for social good.

Publications

The Role of Explainable AI (XAI) in Transforming Healthcare Decision-Making Oct 2024
How AI Can Help Us Detect Misinformation Dec 2024

Projects

AllyCat Project, AI Alliance (Meta & IBM) Aug 2025
Implemented raw RAG and GraphRAG systems for AI retrieval and reasoning tasks; contributed to open-source codebase

LoRA Fine-Tuning of BanglaSenti, XLM-RoBERTa-Base on Google TPUs June 2025
Improved test accuracy: 44.4% → 80.7%, F1 score: 27.3% → 81.0% | Trained on 122,578 samples using TPU v3-8

Free Image Generation, CC0 License on Hugging Face April 2025
Developed a free image generation model with open license for public use

Movie Review Sentiment Analysis, Future AWS AI Scientist Sept 2025
PyTorch & Hugging Face | Binary Sentiment Classification | Test Accuracy: 76.97%

Create Your Own Image Classifier, Udacity AI Programming with Python August 2024
Nanodegree
Preprocessed 102-flower dataset | Built VGG16-based model | Accuracy: 92.5%

Dog Breed Classifier with VGG, Udacity AI Programming Nanodegree July 2024
100% accuracy dog vs non-dog | 93.3% dog breed classification | Built with VGG architecture

Affiliations & Partnerships

AI Youth Alliance (Founder: Niloy Deb Barma) — Associate Member, Open Mainframe Project (Linux Foundation) June 2025 – Present

Leadership, Activities & Volunteering

Rover Scouts Member , Bangladesh Scouts – Rangpur, Bangladesh	Jun 2023 – May 2024
• Led service and safety projects.	
Campus Ambassador , National STEM Olympiad – Bangladesh	Sept 2023 – July 2024
• Organized outreach events for STEAM education.	
Reviewer , AI and Ethics Journal (Springer Nature) – Remote	Oct 2024 – Present
• Assessed AI ethics research papers.	
Citizen Scientist , NASA Exoplanet Watch – Remote	Sept – Oct 2024
• Collected and analyzed light curve data via Python to support exoplanet research.	

Awards & Honours

Udacity & AWS AI & ML Scholarship Program, Future AWS AI Scientist	June 2025
Nanodegree Program	
Galaxy Cruise Citizen Astronomer Recognition – National Astronomical Observatory of Japan	Jan 2025
Udacity & AWS AI & ML Scholarship Program, AI Programming with Python	June 2024
Nanodegree Program	
Rank 27, National STEAM Olympiad Leading Ambassador	May 2024
Bronze Honor – International Youth Math Challenge	Nov 2023
Quarter-Finalist – ClimateScience Olympiad 2024	July 2023
Qualified Participant – Chemical Metrology Olympiad	Aug 2023

Research Grants

Google TPU Research Cloud (TRC) Grant	Oct 2024-Present
--	------------------

Academic Programs & Certifications

Code in Place (Learner & Peer Helper) , Stanford University	Apr 2025 – Jun 2025
• Selected learner progressing in TeachNow track; actively helped 10+ peers, exceeding the usual 3, supporting learning and teaching.	
REYES 2024 Mentee , University of California, Berkeley	Jun 2024 – Sep 2024
• Participated in a remote STEM research training program with weekly mentor meetings, live lectures, and panels to increase science literacy.	
Machine Learning Specialization , Coursera (Stanford University & DeepLearning.AI)	Nov 2023
• Learned supervised and unsupervised learning, neural networks, decision trees, and model evaluation techniques.	