

ARITRA MUKHOPADHYAY

Student, School of Physical Sciences (SPS), NISER

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ABOUT ME

I am a **Physics Major** student (Int. MSc.) at the **National Institute of Science Education and Research (NISER)**. Besides my passion for Physics, I have a keen interest in **Robotics and Technology**. As a **self-taught programmer**, my focus has evolved to encompass research and application of **Machine Learning, Deep Learning, and Image Processing**. Currently, I am engaged in the **Microsoft Academic Partnership Grant (MAPG)** and collaborating with Microsoft to leverage my skills.

PAST PROJECTS & ACHIEVEMENTS

Quantum Computation Internship

Prof. Prasanta K. Panigrahi

June 2022 – July 2022

IISER Kolkata

Internship Report: **Quantum Robot**

Quantum Computation Course

IISER Tirupati & Qkrishi

2022 Summer Break

Online

GitHub Repository: **PeithonKing/Attacking_QKD_Protocols**

Machine Learning Internship

Prof. Kripabandhu Ghosh

Dec 2021 - Jul 2022

IISER Kolkata

GitHub Repository: **PeithonKing/AILA**

CURRENTLY WORKING ON



Transformers at a Fraction

Engaged in a **Microsoft Academic Partnership Grant** project at NISER under Professor Subhankar Mishra, I am currently optimizing neural networks, specifically transformer layers. My goal is to reduce parameter count and computational overhead without compromising performance significantly. This project aims to make these models suitable for deployment on low-end devices, facilitating efficient predictions on mobile devices for instance.

*"Start by doing what's necessary;
then do what's possible;
and suddenly you are doing
the impossible!"*

MOST PROUD OF



Microsoft Academic Partnership Grant (MAPG) 2023

July 2023 - June 2024



Paper on ML

Dec 2023



Came 1st in ML4SCI Hackathon

Nov 2021 - Jan 2022

SKILLS

Physics

Handling Telescopes

Python

C

JavaScript

Web Dev

Robotics

Arduino

Development Board Programming

Hard-working

Eye for detail

Tenacious

Self-motivated

LANGUAGES

English

Speaking, Reading, Writing



Bengali

Speaking, Reading, Writing



Hindi

Speaking, Reading



German

Learning



PUBLICATIONS

Conference Proceedings

- A. Mukhopadhyay, A. A. and S. Mishra, "Large neural networks at a fraction," in *Northern Lights Deep Learning Conference 2024, 2023*. [Online]. Available: <https://openreview.net/forum?id=xVbMj75YDD>.