Ritorshi Pal

Passport: T4332959

Work permit: Indian

Date of birth: 10/02/2001

Place of birth: Kolkata, India

Nationality: Indian

Gender: Male

Contact

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ABOUT MYSELF

I'm a passionate and curious individual with a strong background in Computer Science and a deep interest in research, innovation, and interdisciplinary collaboration. Alongside my academic pursuits, I enjoy expressing my creativity through music, writing, and art. I believe in continuous learning and strive to make meaningful contributions through both technology and human connection.

EDUCATION & TRAINING

12/02/2026 - CURRENT Guwahati, India

Selected for Part-time PhD at IIIT Guwahati in CSE Dept Indian Institute of Information Technology

Website: https://www.iiitg.ac.in/ **Field(s) of study:** Serverless Computing

01/08/2023 - 30/06/2025 Kolkata, India

M.Tech. in Computer Science and Engineering University of Calcutta

Website: https://www.caluniv.ac.in **Field(s) of study:** Computer Science and Engineering | **Final grade:** 8.0 CGPA | **Thesis:** An Attempt to Use Non-Terrestrial Networks in Low-Earth Orbit Satellites for Routing Purposes

01/08/2019 - 20/07/2023 Hooghly, India

B.Tech. in Computer Science and Engineering Maulana Abul Kalam Azad University of Technology

Website: https://www.makautexam.net **Field(s) of study:** Computer Science and Engineering | **Final grade:** 9.27 CGPA | **Thesis:** Retinopathy Detection using Image Processing and Machine Learning

01/04/2017 - 20/02/2019 Kolkata, India

Higher Secondary in Central Board of Secondary Education (CBSE) Delhi Public School Ruby Park Kolkata

Website: https://www.dpskolkata.com | **Final grade:** 74.6%

01/04/2015 - 20/02/2017 Kolkata, India

Secondary School in Central Board of Secondary Education (CBSE) South Point High School

Website: https://southpoint.ac.in | **Final grade:** 8.80 CGPA

WORK EXPERIENCE

B P Poddar Institute of Management and Technology Kolkata, India

Department: Information Technology | **Email:** ritorshi.pal@bppimt.ac.in | **Website:** https://bppimt.ac.in/

Assistant Professor at B P Poddar Institute of Management and Technology

19/08/2025 - Current

Object Oriented Programming in JAVA

Data Structures

Design and Analysis of Algorithms

Digital Electronics

Rajat Kumar De Kolkata, India

Department: Machine Intelligence Unit | **Email:** postmaster@isical.ac.in | **Website:** https://www.isical.ac.in

Research Internship at ISI Kolkata

01/06/2025 - 15/08/2025

Quantum Computation

Neural Networks

Machine Learning

Shilpashree Vanka Bangalore, India

Internship at KPIT Technologies

11/01/2023 - 30/04/2023

Embedded Systems

Microprocessors and Micro-controllers

C Programming

Chip Design

SKILLS

C, C++ | Java (computer programming) | Python (computer programming) | SQL | Web Technologies: HTML5, CSS3 | Java Script

PROJECTS

30/09/2024 - 30/06/2025

An Attempt to Use Non-Terrestrial Networks in Low-Earth Orbit Satellites for Routing Purposes

The rapid advancement of satellite technology has fueled the need for robust communication frameworks to support the growing number of Low-Earth Orbit (LEO) satellites. Non-Terrestrial Networks (NTNs) have emerged as a key enabler for seamless connectivity, offering enhanced coverage, reduced latency, and improved data transmission capabilities. This paper explores the implementation of NTNs for LEO satellites, focusing on inter-satellite links to establish global connectivity for time-critical tasks. We examine key challenges such as dynamic topology management, Doppler shifts, handover strategies, and spectrum allocation in NTN-based LEO networks. Additionally, we analyze various protocols and algorithms that enhance reliability, minimize signal degradation, and optimize resource utilization. The study also delves into potential applications, including global broadband coverage, Internet of Things (IoT) connectivity, and disaster recovery communications. By leveraging edge computing, artificial intelligence, and software-defined networking, NTN implementations can significantly enhance network efficiency and adaptability. This research highlights recent advancements in NTN standardization efforts and proposes optimized solutions for seamless LEO satellite communication. Our findings demonstrate that well-structured NTN deployments can revolutionize global connectivity, paving the way for next-generation satellite communication systems.

10/02/2024 - 20/07/2024

Towards Scalable and Accurate Diabetic Retinopathy Screening: A Machine Learning Perspective

Diabetes, a chronic metabolic disorder, arises from either the insufficient production of insulin or the body's diminished responsiveness to insulin. This condition gives rise to severe complications, including cardiovascular disorders, vascular diseases, strokes, kidney dysfunction, neuropathy, and diabetic retinopathy—a condition affecting the eyes. Diabetic retinopathy, characterized by progressive damage to retinal blood vessels, poses a substantial threat to vision. This paper focuses on the automated detection of diabetic retinopathy (DR) in fundus images through the application of advanced image processing and machine learning techniques. The quantification of disease progression within the retina is achieved by extracting relevant features, such as blood vessels, haemorrhages (associated with non-proliferative diabetic retinopathy, NPDR), and exudates (associated with proliferative diabetic retinopathy, PDR), from raw fundus images using image processing techniques. From the utilized dataset, 70% of the images are designated for training, and the remaining 30% for testing. These findings highlight the potential of machine learning techniques in providing a precise and efficient automated diagnosis of diabetic retinopathy, contributing to the advancement of early intervention strategies in the management of diabetes-related ocular complications.

LANGUAGE SKILLS

MOTHER TONGUE(S): Bengali
OTHER LANGUAGE(S): English | Hindi | German

HOBBIES AND INTERESTS

Hobbies

Singing, Violin, Ukulele, Mouth organ, Drawing, Photography, Writing poetry (English and Bengali), Playing chess

Link https://www.youtube.com/@nerdrageonviolin459