Department of Computer Science
Ramakrishna Mission Residential College (Autonomous)
Narendrapur, Kolkata-700103, India
Email: sudiptasarkar3600@gmail.com
Phone: +91 **9641771484**
Website: https://sudipta-rkmrc.github.io/website/
GitHub: https://github.com/Rik-Sarkar-07
LinkedIn: https://www.linkedin.com/in/sudipta-sarkar-0665b5253/

SUDIPTA SARKAR

Objective

A committed Computer Science postgraduate student with expertise in **Artificial Intelligence, Deep Learning and Computer Vision**. Proficient in programming and theoretical concepts, seeking opportunities to apply knowledge and contribute to advanced research in dynamic environments.

Education

M.Sc. in Computer Science **Sept. 2023 – June 2025**

Ramakrishna Mission Residential College (Autonomous), Narendrapur, Kolkata, India

- **Thesis Topic:** Super Image For Efficient Large Scale Video Action Recognition
- **Guide:** Prof. Abir Das, Department of Computer Science and Engineering, IIT Kharagpur
- **CGPA:** 9.95 out of 10.00 (96.30%)

B.Sc. in Computer Science **Sept. 2020 – May 2023**

Ramakrishna Mission Vivekananda Centenary College, Rahara, Kolkata, India

- **Thesis Topic:** Human Facial Expression Detection
- **Guide:** Prof. Chayan Halder and Prof. Prasenjit Das, Department of Computer Science, RKMVCC, Rahara
- **CGPA:** 9.72 out of 10.00 (92.02%)

Higher Secondary **May 2018 – May 2020**

Hogalbaria Adarsha Siksha Niketan (H.S), Hogalbaria, Nadia, West Bengal, India

- **Subject Combination:** Physics, Chemistry, Mathematics, and Biology
- **Board:** WBCHSE
- **Percentage:** 83%

Projects and Research Works

Super Image For Efficient Large Scale Video Action Recognition | *PyTorch, Hiera Vision Transformer* **June 2025**

- Rearranged video frames into super images to convert video action recognition into an image classification task. Employed Hiera Vision Transformer (Hiera-ViT) as the classifier, achieving competitive results on Kinetics-400 and Something-Something V2 (SSV2) datasets.
- Final year M.Sc. project under the supervision of Prof. Abir Das, IIT Kharagpur.

Image Steganography and Steganalysis | *Python, Deep Learning, CNN, LSTM* **June 2024**

- Investigated techniques for embedding and detecting hidden messages in images using CNN and LSTM models. Applied optimization techniques to enhance robustness and improve the quality of hidden messages.
- Supervised by Prof. Siddhartha Banerjee and Prof. Bibek Ranjan Ghosh, Ramakrishna Mission Residential College (Autonomous), Narendrapur.

Human Facial Expressions Detection | *Python, Deep Learning, CNN* **May 2023**

- Developed a CNN-based model to classify facial expressions such as anger, fear, surprise, sadness, and happiness by analyzing facial features. Trained on facial emotion datasets to identify emotions in real-time.
- Final year B.Sc. project under Prof. Chayan Halder and Prof. Prasenjit Das, Ramakrishna Mission Vivekananda Centenary College, Rahara.

Nuclei Segmentation Using UNet | *Python, Deep Learning, UNet* **March 2023**

- Implemented a UNet-based architecture to segment cell nuclei in microscopy images, enhancing image analysis for biological research.
- Supervised by Prof. Biswajit Biswas, Ramakrishna Mission Vivekananda Centenary College, Rahara.

Experience

Research Intern, IIT Kharagpur **Jan. 2025 – Ongoing**

Department of Computer Science and Engineering, IIT Kharagpur, India

- **Project Title:** Resource-Efficient Learning for Video Scene Understanding (RLV).
- **Under Supervision:** Prof. Abir Das, Department of Computer Science and Engineering, IIT Kharagpur.

IT Sub-Committee Member, Vidyarthi Sabha **Sept. 2023 – Sept. 2024**

Ramakrishna Mission Residential College (Autonomous), Narendrapur, Kolkata, India

- Managed and provided IT consulting services as part of the Vidyarthi Sabha IT Sub-Committee.

Co-Organizer, Neuroverse Coding Competition **March 2023 – April 2023**

Ramakrishna Mission Vivekananda Centenary College, Rahara, Kolkata, India

- Designed and curated problem sets for Neuroverse, a college-level coding competition.

Relevant Courses

- Design and Analysis of Algorithms
- Data Structures
- Theoretical Computer Science
- Database Management Systems
- Mathematics for Computer Science
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Computer Vision
- Generative Models

Technical Skills

Languages: C, C++, Python, Java, SQL
Developer Tools: VS Code, Eclipse, Jupyter Notebook, Qt Creator,
Technologies/Frameworks: OpenCV, Numpy, Pandas, Scikit, TensorFlow, PyTorch, Torchvision, Linux, GitHub, LaTeX

Achievements

- **1st Rank Holder in M.Sc Course** June 2025
- **Selected for National Scholarship for Post Graduate Studies** Oct 2024
- **3rd Rank in RKMVERI M.Sc Admission Test** June 2023
- **3rd Rank Holder in B.Sc Course** May 2023
- **1st Rank in Intra College Coding Competition** May 2022

Research Interests

- Computer Vision
- Deep Learning
- Generative Models
- Pattern Recognition
- Video Action Recognition
- Activity Detection

Languages

- English (Professional working)
- Hindi (Elementary proficiency)
- Bengali (Native proficiency)

Interests

- Coding
- Reading
- Cricket

Referees

- **Dr. Chayan Halder**
  - Assistant Professor, Department of Computer Science
  - Ramakrishna Mission Vivekananda Centenary College, Rahara, Kolkata, India
  - Email: chayan.comp@rkmvccrahara.org
- **Dr. Siddhartha Banerjee**
  - Associate Professor and Head of the Department, Department of Computer Science
  - Ramakrishna Mission Residential College, Narendrapur, Kolkata, India
  - Email: sidd$_0$1$_0$2@*yahoo.com*