



Biswarup Karmakar

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EDUCATION

- **Indian Institute of Science** Bengaluru, India
Ph.D. in Computational and Data Science(CDS) August 2022 - Present
CGPA (25 credits): 8.6
Supervisor: Dr. Ratikanta Behera
- **IIT Kanpur** Uttar Pradesh, India
M.Sc in Mathematics August 2018 - June 2020
CGPA: 6.9
- **Serampore College (Calcutta University)** West Bengal, India
B.Sc. in Mathematics July 2015 - June 2018
Overall Percentage: 76.67

RESEARCH AREA

Numerical Linear Algebra, Tensor Decomposition with Application in Imaging, Data Science.

ACHIEVEMENTS AND QUALIFICATION

- Secured **AIR 58 (Score: 683)** in **GATE** (Mathematics) 2021.
- Secured **AIR 125** (JRF) in the CSIR NET EXAM June 2019
- Secured **AIR 165** (JRF) in the CSIR NET EXAM December 2019.
- Secured **AIR 194** in the The Joint Admission Test for M.Sc. 2018 conducted by IITs.
- Recipient of **INSPIRE Scholarship** (2015-2020) from DST, Govt. of India.
- Passed 10th and 12th with 90.3% and 93% respectively from WB Board.

ACADEMIC PROJECT

- **Sobolev Spaces and Existence of Weak Solutions for Second-order Elliptic PDE**
Advisor : Prof. Prosenjit Roy, Department of Mathematics, IIT Kanpur Jan 2020 - Jun 2020
This project focuses on properties of Sobolev spaces, their density in the set of smooth functions, extension to the whole space, and the establishment of existence and uniqueness of weak solutions using the Lax-Milgram theorem for 2nd order elliptic equations..
- **Decomposition of Third order Quaternion Tensors with application in colour video processing**
Supervisor: Dr. Ratikanta Behera, Department of CDS,IISC Jan 2023-April 2023
We used Qt-SVD to analyse the structure of color videos, and the low rankness of color videos is demonstrated with numerical experiments.

TECHNICAL SKILLS

- **Languages** : C, C++, Python, Matlab.
- **Libraries** : Numpy, Scipy, Matplotlib, Pandas, Tensorly, CUDA (cuBLAS), Pytorch, scikit-learn.
- **Software/OS**: Linux, Windows, LateX, MS Office.