

Shubhajit Dey

Email | Webpage | GitHub | LinkedIn | ResearchGate

Education

2019 - 2024 **BSMS. Mathematics and Data Science**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISORS : Dr. Anandateertha Mangasuli, Dr. Ambuj Pandey
THESIS : Theoretical & computational considerations of Sturm-Liouville systems

Professional Experiences

Sep 2024 - Jun 2025 **Teaching Fellow**
ASHOKA UNIVERSITY, NCR

May 2024 - Sep 2024 **Graduate Researcher**
UNIVERSITÉ DU QUÉBEC À MONTRÉAL, MONTRÉAL

Research Experiences & Projects

Aug 2023 - May 2024 **Theoretical & computational considerations of Sturm-Liouville systems** (*MS Thesis project*)
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISORS : Dr. Anandateertha Mangasuli, Dr. Ambuj Pandey
THESIS : [\[pdf\]](#) — CODE : [\[GitHub Repo\]](#)

May 2024 - Sep 2024 **Signature based computational algebraic geometry for optimisation under uncertainty**
UNIVERSITÉ DU QUÉBEC À MONTRÉAL, MONTRÉAL
ADVISORS : Dr. Janosch Ortmann, Prof. Walter Rei
REPORT : *progressing towards a publication; preprint to be available soon.*

Aug 2022 - Dec 2022 **A preliminary survey on ‘Deep Maths’** (*Reading project*)
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISOR : Dr. Vinod K Kurmi
REPORT : [\[pdf\]](#)

May 2022 - Aug 2022 **On characterising dense and compact subspaces of $C(X, \mathbb{R})$**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISOR : Dr. Anandateertha Mangasuli
REPORT : [\[pdf\]](#)

Dec 2021 - Jan 2022 **On Taylor’s approximation and some associated theorems for convergence of power series with computational applications**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISOR : Dr. Anandateertha Mangasuli
REPORT : [\[pdf\]](#) — CODE : [\[Jupyter Notebook\]](#)

Aug 2021 - Dec 2021 **Acoustic scene classification using auditory datasets – statistical data analysis and scientific AI**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
ADVISOR : Dr. Vaibhav Kumar
REPORT : [\[pdf\]](#) — CODE : [\[GitHub Repo\]](#)

Conferences & Talks

Workshops Attended

- Jan 2025 **Explorations in Statistics, Probability, Learning and Optimization Research - (exSPLORE 2025)**
ASHOKA UNIVERSITY, NCR
- Feb 2023 **Annual Mathematics Symposium 2024 - (Analysis)**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL
- Dec 2020 **Indian School of Logic & its Applications - (ISLA 2020)**
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHOPAL

Grants & Awards

- May 2023 - Aug 2023 **MITACS GRI Grant**
CAD 10,000

Administrative Responsibilities

At IISERB

- 2022 (*one-time*) **Event Coordinator & Core-team member**
Annual Outreach Programme, Dept. of Mathematics
- Aug 2022 - Aug 2023 **Department Representative**
BSMS 2019 Batch, Dept. of Mathematics
- Aug 2020 - Aug 2022 **Coordinator**
IISERB Quiz Club, Cultural Council

Skills

- Language** **Fluent:** Python, C++ | **Familiar:** R
- Programming** **Fluent:** Object Oriented Programming | **Familiar:** Functional Programming
- Software** MATLAB, Wolfram Mathematica
- Analytics** Jupyter Notebook, RStudio
- Tools** L^AT_EX, HTML
- Libraries** **Fluent:** NumPy, Matplotlib, Pandas, SciPy, Scikit-Learn, PyTorch
Familiar: Keras, Qiskit, Librosa