

Somenath Kuiry, Ph.D.

Assistant Professor, Dept. of CSE(AIML), CSBS; IEM Kolkata



About me

I am an Assistant Professor and researcher with expertise in Mathematics, Machine Learning, and Computer Vision. I hold a Ph.D. in the domain of Artificial Intelligence, and my work focuses on developing mathematically grounded AI models and applying them to real-world problems. I have published in reputed journals and conferences, and I remain committed to quality teaching, active research, and mentoring students in emerging areas of AI and applied mathematics.

personal

Somenath Kuiry
nationality: INDIAN
05/02/1993

Subject Skills

DEEP LEARNING • MACHINE
LEARNING • MATHEMATICS
• STATISTICS

Interests

Travelling / Drawing
/ Movies and Series
/ Lo-Fi musics

SHORT RESUMÉ

2024(July)–present

Assistant Professor

DEPARTMENT OF CSE(AIML),CSBS Institute of Engineering & Management, Kolkata



2025(Oct)–present

Center-in-charge

IEM CENTER OF EXCELLENCE FOR DATA SCIENCE Institute of Engineering & Management, Kolkata



2022–present

Course Instructor

SIX MONTH CERTIFIED COURSE ON **ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**. Offered by **CMATER LAB**, Department of CSE, JU



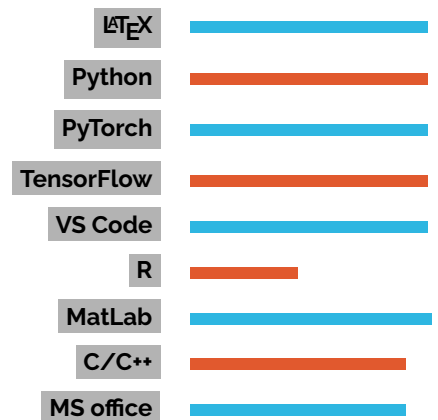
Profile Link

[HTTPS://WWW.CMATERJU.IN/SCHOLARS/SOMENATH-KUIRY](https://www.cmaterju.in/scholars/somenath-kuiry)

DEGREES

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| 2025 | Ph.D. (Mathematics)
JADAVPUR UNIVERSITY ·
WEST BENGAL  |
| 2016 | M.Sc. in Mathematics and Computing (CPI -7.62)
IIT GUWAHATI · ASSAM  |
| 2014 | B.Sc. in Mathematics (Marks - 82.25 %)
SIDHO KANHO BIRSA UNIVERSITY · PURULIA, WEST BENGAL  |
| 2011 | 12 th (Marks - 81.8%)
PURULIA ZILLA SCHOOL ·
PURULIA, WEST BENGAL  |
| 2009 | 10 th (Marks - 81.5%)
PURULIA ZILLA SCHOOL ·
PURULIA, WEST BENGAL  |

COMPUTER SKILLS



CURRENT AREAS OF RESEARCH

Classification and Object Detection from Multi-Spectral Images

Ensembling of Deep Learning Models in Image Segmentation and Classification domains

Uncertainty Modeling and Estimation Deep Learning models

Explainability of Black box models

Quantum Computing

FUTURE RESEARCH PLAN

Explainable and Trustworthy AI

Developing mathematically grounded frameworks for model interpretability, sensitivity-based explanations, and reliability assessment in deep learning systems across imaging and scientific domains.

Robust and Generalizable Deep Models for Healthcare

Designing regularization strategies and uncertainty-aware learning methods to improve model performance, stability, and reliability in medical image analysis and clinical decision-support applications.

Quantum Machine Learning and Hybrid Architectures

Investigating hybrid Classical-Quantum algorithms for complex pattern recognition and optimization tasks, with a focus on exploring quantum advantages in high-dimensional learning problems.

CURRENT ACCOMPLISHMENTS

2016	WBSET
2016, 2018, 2019	GATE (MS)
2016	JOINT UGC-CSIR NET(MATHEMATICAL SCIENCE) NET(JRF)
2015	JOINT UGC-CSIR NET(MATHEMATICAL SCIENCE) NET(LS)
2016	DST-INSPIRE FELLOWSHIP AWARDEE
2014	University 2nd Rank Holder in B.Sc.
2012	DST-INSPIRE SCHOLARSHIP AWARDEE

LANGUAGES KNOWN

Bengali	mother tongue
English	
Hindi	

PUBLICATIONS

1. Md Osman Gani, **Somenath Kuiry**, Alaka Das, Mita Nasipuri, and Nibaran Das. "Multispectral object detection with deep learning." In International Conference on Computational Intelligence in Communications and Business Analytics, pp. 105-117. Springer, Cham, 2021.
2. Shubhadeep Bhowmick, **Somenath Kuiry**, Alaka Das, Nibaran Das, and Mita Nasipuri. "Deep Learning-Based Outdoor Object Detection Using Visible and Near-Infrared Spectrum." Multimedia Tools and Applications 81, no. 7 (2022): 9385-9402.
3. **Somenath Kuiry**, Alaka Das, Kasturi Das, Mita Nasipuri and Nibaran Das. "GA-RISE: Posthoc Model Agnostic Explanations of Black-box Classifiers using Genetic Algorithm-based Optimized Masks - A Case Study on Chest X-ray Images" International Journal on Artificial Intelligence Tools 34.01 (2025): 2550006.
4. Dibyasree Guha, **Somenath Kuiry**, Shyamali Mitra, Nibaran Das. "ResQ: A Hybrid Classical-Quantum Model for Efficient Breast Cancer Image Classification" Applied Soft Computing (2025): 113631.
5. **Somenath Kuiry**, Alaka Das, Mita Nasipuri and Nibaran Das. "Regularizing Deep CNN with label smoothing based on class confusions for histopathology images." International Conference on Computational Intelligence in Communications and Business Analytics, pp. 257-269. Cham: Springer Nature Switzerland, 2024.
6. Anay Panja, **Somenath Kuiry**, Alaka Das, Mita Nasipuri and Nibaran Das. "COVID-CT-H-UNet: a novel COVID-19 CT segmentation network based on attention mechanism and Bi-category Hybrid loss." International Conference on Computational Intelligence in Communications and Business Analytics, pp. 100-112. Cham: Springer Nature Switzerland, 2024.
7. Dibyasree Guha, Shyamali Mitra, **Somenath Kuiry**, and Nibaran Das. "An ensemble framework approach of hybrid quantum convolutional neural networks for classification of breast cancer images." In International Conference on Data, Electronics and Computing, pp. 295-306. Singapore: Springer Nature Singapore, 2024.
8. Kushan Choudhury, Shubhrodeep Roy, Ankur Chanda, Shubhajit Biswas, and **Somenath Kuiry**. "Improving Predictive Confidence in Medical Imaging via Online Label Smoothing." In BIO Web of Conferences, vol. 204, p. 01019. EDP Sciences, 2025.
9. Ankur Chanda, Kushan Choudhury, Shubhrodeep Roy, Shubhajit Biswas, and **Somenath Kuiry**. "Evaluating Temperature Scaling Calibration Effectiveness for CNNs under Varying Noise Levels in Brain Tumour Detection." In BIO Web of Conferences, vol. 204, p. 01020. EDP Sciences, 2025.
10. Dibyasree Guha, **Somenath Kuiry**, and Nibaran Das. "YAM: A Novel Binarization approach for Non-Uniformly Illuminated Document Images." In ICRCICN 2025(Accepted and Presented).
11. **Somenath Kuiry**, Nibaran Das, Alaka Das, and Mita Nasipuri. "EDC3: Ensemble of Deep-Classifiers using Class-specific Copula functions to Improve Semantic Image Segmentation." arXiv preprint arXiv:2003.05710 (2020).
12. **Somenath Kuiry**, Alaka Das, Rodrigue Rizk, KC Santosh, Mita Nasipuri and Nibaran Das. "Leveraging Class-Specific Copula Functions for Enhanced Ensemble Learning in Medical Imaging." (under review)
13. **Somenath Kuiry**, Alaka Das, Mita Nasipuri and Nibaran Das. "Copula-based Fusion of Multi-level super-pixels for natural scene segmentation." (under review)

TEACHING EXPERIENCE

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| 2024 - Present | Artificial Intelligence and Machine Learning, IT Workshop(MATLAB), Quantum Computing, Introduction to AI and Data Science using Python and Programming for Problem Solving using C at: Department of CSE(AIML), CSBS offered by Institute of Engineering & Management, Kolkata. |
| 2022 - Present | Artificial Intelligence, Machine Learning, Python Programming at: Six Month Certified Course on AI and Data Science offered by CMATER lab, Department of CSE, JU. |
| 2018 - 2022 | Complex Analysis, Probability and Statistics, Vector Calculus, Sequence and Series at: B.Tech course JU |

WORKSHOP ATTENDED

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| 2025 | 5 Day FDP on Empowering Educators by Building their Expertise in Securities Markets at NISM Campus, Mumbai |
| 2022 | INDOML 2022 at IIT Gandhinagar |
| 2020 | MoDL: Mathematics of Deep Learning , Faculty Development Program / Advanced School offered by, Centre of Excellence in Artificial Intelligence, IIT KGP |
| 2019 | 3-DAY WORKSHOP ON MACHINE LEARNING AND DATA ANALYTIC at:Jadavpur University on 26th to 28th March 2019 Organized By: Department of Computer Science Engineering, Jadavpur University. |
| 2018 | RTIP2R 2018 at: Solapur University. |

RESPONSIBILITIES

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| Center-in-charge | IEM Center of Excellence for Data Science |
| Reviewer(Conference) | COMSYS 2020, 2021, 2022, 2023, 2024; ICDEC 2022, 2023, 2024, ICDSA 2021, CBMS 2021 |
| Reviewer(Journal) | Sāadhanā . Published by the Indian Academy of Sciences (Springer) |
| Volunteer | ICDCN 2020 |

REFERENCES

1. **Dr. Nibaran Das**, Professor, Department of CSE, Jadavpur University
email: nibaran.das@jadavpuruniversity.in
2. **Dr. Alaka Das**, Professor, Department of Mathematics, Jadavpur University,
email: alaka.das@jadavpuruniversity.in
3. **Dr. Mita Nasipuri**, Professor, Department of CSE, Jadavpur University
email: mitanasipuri@gmail.com

CONTACT INFORMATION

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Permanent Email	sk95068@gmail.com
Google Scholar	https://scholar.google.com/citations?hl=en&user=7_9axVgAAAAJ
LinkedIn	https://in.linkedin.com/in/somenath-kuiry-250ba5190
ResearchGate	https://www.researchgate.net/profile/Somenath-Kuiry