Soumya Snigdha Kundu

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Education

King's College London — Ph.D. Biomedical Engineering and Imaging Science — Oct 2023 – Oct 2027
Queen Mary University of London — M.Sc. Machine Learning (Distinction) — Sep 2022 – Sep 2023
SRM Institute of Science and Technology — B.Tech. Computer Science (Distinction) — Jul 2018 – May 2022

Representative Papers

S. S. Kundu et al. (2026). Instance Awareness of Multi-class Semantic Segmentation Loss Functions. *CV4CLINIC@**CVPR***.
S. S. Kundu et al. (2025). Cluster Dice. *SPIE Medical Imaging*.
S. S. Kundu et al. (2024). Spinal osteophyte detection via robust patch extraction on minimally annotated x-rays. *IEEE **ISBI***.
Naidu, R. & **S. S. Kundu** (2021). Improved variants of Score-CAM via Smoothing and Integrating. *RCV@**CVPR***.
S. S. Kundu (2021). A Distributed Deep Learning Framework for Federated Big Medical Image Analysis. *IEEE **Big Data***.

Relevant Industry Experience

Cosine (YC 23) — Machine Learning and Product Intern (Genie 3; Multilingual SWE-Bench) — Summer 2025

Representative Software & Open Source Contributions

Panoptica — [Maintainer] Instance-wise segmentation metrics — 26⋆
Ultraflwr — [Author] Federated learning on the edge — 20⋆
MONAI — [Core contributor] to the Medical Open Network for AI (MONAI) — 8k⋆
PRs: Optax [#1340, #1366, #1458], batchgeneratorsv2 [#16, #19], torchsparsegradutils [#63, #65, #66, #67], OpenTUI [#253], Fresh [#421]

Representative Fellowships & Grants

Google Summer of Code (**GSoC**) — Neuroinformatics Unit (1,141 of 23,371 proposals selected, ∼4.9%) — 2026
MRC DTP Postgraduate Studentship — King's College London (<2% selection, ∼£205k) — 2023
BDI Summer Internship — University of Oxford (1 of 4 selected) — 2023
Summer Research Internship — IIT Gandhinagar (<0.008% selection) — 2023
MITACS Globalink Research Internship — TRIUMF (UVic) (<3% selection) — 2021

Representative Awards

SPIE Medical Imaging Travel Grant Award ($1000) — 2025
IEEE ISBI'24 Best Student Poster Award Finalist (Top 8 of 717) — 2024
UKRI Fast Start: Innovation Grant — Co-Applicant (∼£50k) — 2022

Programming & Software Development

Languages: Python, C++, Bash, LaTeX
ML: PyTorch, JAX, NumPy, CUDA
Tools: Git, Slurm, Docker, Kubernetes, macOS, Linux

Graduate Teaching

Image and Signal Processing (Prof. James Housden) — Spring 2026
Python (Dr. Marc Modat and Dr. Jonathan Shapey) — Spring 2026
Journal Club — Biomedical Engineering (Prof. Monica Agromayor) — Winter 2024 & Spring 2025
Statistics — Biomedical Engineering (Prof. James Housden) — Spring 2025

Supervision

Yingfang Tao — KCL BSc Thesis Supervision — 2025–26
Jai Pradeep Awasthi and Pranav Rustagi (LNMIIT) with Yang Li — Summer 2025
In2Stem (4 High School students) with Lorena Garcia-Foncillas Macias — Summers 2024/25

Academic Service

Reviewing: MICCAI, ICML, NeurIPS, ICLR, AISTATS, IEEE-ISBI.

References available on request.