



# Jimut Bahan Pal

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*"Researching innovative Deep Learning solutions."*

## Research Interests

Deep Learning, Computer Vision in Medical Settings, Semi-supervised Learning, Generative Networks, Explainable AI and Unsupervised Learning.

## Education

- 2022 – Present **Ph.D.** Centre for Machine Intelligence and Data Science, *Indian Institute of Technology Bombay*
- 2019 – 2021 **M.Sc. in Computer Science**, *Ramakrishna Mission Vivekananda Educational and Research Institute*, Belur, Howrah.
- o Thesis – **Instance Segmentation of Peripheral Blood Smear and Refining Classification via Domain Adaptation.**
- 2016 – 2019 **B.Sc. (Hons.) Computer Science** *St. Xavier's College*, Park Street, Kolkata.
- o Dissertation – **Wisp: A Preference Based Location Finder Application.**

## Awards & Accolades

- June 2022 **C-MInDS fellowship** for getting the **highest entrance test and interview scores in IIT Bombay**
- Feb. 2022 **Qualified in UGC-NET 2021**, for Assistant Professor.
- March. 2022 **Qualified in GATE 2021 and 2022.**

## Publications

### Journals

- 2023 / Q2 / IF: 1.175 **Pal, J. B., & Mj, D. (2023).** Improving multi-scale attention networks: Bayesian optimization for segmenting medical images. *The Imaging Science Journal*, 71 (1), 33-49. Retrieved from <https://doi.org/10.1080/13682199.2023.2174657>, doi:10.1080/13682199.2023.2174657

- 2023 **Pal, J. B.**, Bhattacharyea, A., Banerjee, D., & Maharaj, T. (Under review) Instance segmentation of peripheral blood smear and refining classification via domain adaptation.

### Conference Proceedings

- 2022 **Pal, J. B.**, & Paul, N. (2022). Classifying Chest X-Ray COVID-19 images via Transfer Learning. In 2021 Ethics and Explainability for Responsible Data Science (EE-RDS) (p. 1-8). doi: 10.1109/EE-RDS53766.2021.9708580

### Workshop Papers

- 2022 / MICCAI Workshop **Pal, J.B.** (2022). Holistic Network for Quantifying Uncertainties in Medical Images. In: Crimi, A., Bakas, S. (eds) Brainlesion: Glioma, Multiple Sclerosis, Stroke and Traumatic Brain Injuries. BrainLes 2021. Lecture Notes in Computer Science, vol 12963. Springer, Cham. [https://doi.org/10.1007/978-3-031-09002-8\\_49](https://doi.org/10.1007/978-3-031-09002-8_49)

### Preprints

- 2022 Eisenmann, M., Reinke, A., Weru, V., Tizabi, M. D., Isensee, F., Adler, T. J., . . . **Pal, J.B.**,... Maier-Hein, L. (2022). Biomedical image analysis competitions: The state of current participation practice. arXiv. Retrieved from <https://arxiv.org/abs/2212.08568> doi: 10.48550/ARXIV.2212.08568
- 2020 **Pal, J. B.** (2020). How to cluster nearest unique nodes from different classes using jjcluster in wisp application? CoRR, abs/2002.05886 . Retrieved from <https://arxiv.org/abs/2002.05886>

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## Experience

- March – April, 2020 **Computer Application teacher, RKMVERI, Belur, Howrah.**  
Taught the class of PGDY (2020-21) comprising 12 students about computer applications. Guided students to research on independent projects and develop communication skills.
- Jan – March, 2019 **Project Intern, Data Sutram, Rabindra Sarovar, Kolkata.**  
Analyzed, visualized and gained valuable insights from data.
- Sep., 2018 **Key-note Speaker, (sponsored by Google), MLCC-SXC, St. Xavier's College, Kolkata.**  
Created course work and delivered lectures for Machine Learning Crash Course seminars.
- Nov. 2017 – Jan. 2018 **Developer, Xavotsav 2018 Website, Designed a website for the cultural fest of St. Xavier's College, Kolkata, with our team.**

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## Selected Open Source Softwares

- Feb 2019 **Jimutmap** A tool to download satellite images and road maps with ease.  
o Used for testing deep learning algorithms. Over **Over 20K total downloads from python3-pip package.**
- Jan. 2019 **Jimner** Create ASCII Art writing for terminal.  
o Generated banner of **314 samples** of styles using Python-3.
- Nov. 2018 **Management Information System: A CRUD (Create Read Update Delete) system built using Python3 and Tkinter from scratch.**

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## Leadership

- Aug. 2018 – Jan. 2019 **Coordinator & Teacher, National Service Scheme (NSS)** – Coordinated and organized tours (four times) for educating the unprivileged in a nearby village. This was part of curriculum (social work) at St. Xavier's College, Kolkata.

- Feb 2019 **Event Head** of *ENIGMA* – Planned, organized and executed the annual coding event of Science Association, St. Xavier's College, Kolkata.
- July – Sep., 2018 **Head of Graphics Design Team**, *Analytica (Dept. of Mathematics)* – Lead and planned a team of 5 highly motivated designer to create and design all the graphics content that were used at the event in St. Xavier's College, Kolkata.

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## Online Specializations

- Dec. 2019 **Deep Learning Specialization**, *DeepLearning.AI*, Coursera - License: TUKRVHKG2SJW.
- March 2019 **TensorFlow in Practice Specialization**, *DeepLearning.AI*, Coursera - License: 88P8SNNTFTH.
- Sep. 2018 **Applied Data Science Specialization**, *IBM*, Coursera - License: K36A43C6J3N7.
- Jan. 2018 **Python for Everybody Specialization**, *University of Michigan*, Coursera - License: RQHE57YQZ2ZW.

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## Miscellaneous

- June 2019 – Documented **blogs** during free time. Maintained a page for PDF writings.
- 2017 – 2018 Created several **games** during B.Sc. in St. Xavier's College. The games can be played online from Projects page.
- Jan. 2016 Selected in the second phase of **Service Selection Board (SSB)**, **Indian Army**.

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## References

On Request.