Jimut Bahan Pal

Ph.D. Candidate.
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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

Conference Proceedings

Oct. 2021 **Pal, J. B.**, & Paul, N. (2021). 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

Book Chapters

July 2021 **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

Journals

Feb. 2021 - **Pal, J. B.**, Bhattacharyea, A., Banerjee, D., & Maharaj, T. (Accepted). Instance
July 2021 segmentation of peripheral blood smear and refining classification via domain adaptation. Computer Methods in Biomechanics and Biomedical Engineering (Imaging & Visualization) journal

Oct. 2020 - **Pal, J. B.**, & Mj, D. (Under Review). Improving multi scale attention networks: Bayesian
July 2021 optimization for segmenting medical images. Computer Methods and Programs in Biomedicine Update (Elsevier)

Preprints

2020 Eisenmann, M., Reinke, A., Weru, V., Tizabi, M. D., Isensee, F., Adler, T. J.,. . . 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`

Experience

March – **Computer Application teacher, *RKMVERI*, Belur, Howrah.**
April, 2020 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, **Project Intern,** *Data Sutram,* Rabindra Sarovar, Kolkata.
2019 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 – **Developer**, ***Xavotsav 2018 Website**, Designed a website for the cultural fest of St. Xavier's College, Kolkata, with our team.*

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.*

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.

Online Specializations

Dec. 2019 **Deep Learning Specialization,** *DeepLearning.AI*, Coursera - License: TUKRVHKG2SJW.

March 2019 **TensorFlow in Practice Specialization,** *DeepLearning.AI*, Coursera - License: 88P8SNNTEFTH.

Sep. 2018 **Applied Data Science Specialization,** *IBM*, Coursera - License: K36A43C6J3N7.

Jan. 2018 **Python for Everybody Specialization,** *University of Michigan*, Coursera - License: RQHE57YQZ2ZW.

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.**

References

On Request.