Oindrila Saha

PhD Student, UMass Amherst
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Google Scholar

Research Interests

My broad interests lie in Computer Vision and Machine Learning. I am interested in data-efficient representation learning (eg. self-supervised learning) for solving recognition tasks.

Education

University of Massachusetts Amherst *2021 - present*
PhD in Computer Science

Indian Institute of Technology Kharagpur *2014 - 2019*
B.Tech (E&ECE) + M.Tech (Honours) in Visual Information Processing and Embedded Systems
Minor in Computer Science and Engineering

Experience

Microsoft Research India *2019 - 2021*
Research Fellow with Dr. Prateek Jain and Dr. Harsha Simhadri
- Computer vision for resource-constrained devices

Adobe Research India *2018*
Research Intern with Dr. Niyati Chhaya
- NLP for social media analysis

Publications

GanOrCon: Are Generative Models Useful for Few-shot Segmentation?
Oindrila Saha, Zezhou Cheng, Subhransu Maji
Submitted - 2022

RNNPool: Efficient Non-linear Pooling for RAM Constrained Inference. MSR Blog
Oindrila Saha, Aditya Kusupati, Harsha Vardhan Simhadri, Manik Varma and Prateek Jain.
Spotlight *(3% acceptance) at Neural Information Processing Systems (**NeurIPS**), 2020.*
*WiCV workshop @ Computer Vision and Pattern Recognition (**CVPR**), 2020.*

RecSal : Deep Recursive Supervision for Visual Saliency Prediction.
Sandeep Mishra* and **Oindrila Saha***.
*British Machine Vision Conference (**BMVC**), 2020.*

IDRiD: Diabetic Retinopathy–Segmentation and Grading Challenge.
Prasanna Porwal, [and 56 others, including **Oindrila Saha**]
*Medical Image Analysis (**MedIA**) Journal, 2020 .*

Learning with Multitask Adversaries using Weakly Labelled Data for Semantic Segmentation in Retinal Images.
Oindrila Saha, Rachana Sathish and Debdoot Sheet.
Long Oral *at Medical Imaging with Deep Learning, (**MIDL**), 2019.*
Selected for Special Issue submission in Medical Image Analysis journal.

Do events change opinions on social media? A case study of the 2016 US Presidential Debates.
Sopan Khosla, Niyati Chhaya, Shivam Jindal, **Oindrila Saha** and Milind Srivastava.
*International Conference Social Informatics, (**SocInfo**) 2019.*

Workshops:

Fully Convolutional Neural Network for Semantic Segmentation of Anatomical Structure and Pathologies in Colour Fundus Images Associated with Diabetic Retinopathy.
Oindrila Saha, Rachana Sathish and Debdoot Sheet.
*Diabetic Retinopathy Challenge Workshop @ International Symposium of Biomedical Imaging (**ISBI**), 2018.*
2nd in leaderboard and 3rd in on-site challenge workshop.

Crowdsourcing for Chromosome Segmentation and Deep Classification.
Monika Sharma*, **Oindrila Saha***, Anand Sriraman, Ramya Hebbalaguppe, Lovekesh Vig and Shirish Karande.
*CVMI Workshop @ Computer Vision and Pattern Recognition, (**CVPR**), 2017.*
* - equal contribution

Software

1. **EdgeML: Machine Learning for resource-constrained edge devices**.
   Microsoft Research India, 2017 - present.

Selected Awards and Honors

- Young Researcher at Heidelberg Laureate Forum (**HLF '20**). *2020*
- Awarded **Charpak Research Internship Scholarship** by Embassy of France (to top 20 students over India) to conduct research in a French Laboratory. *2017*
- Awarded **Best Project** among 23 research intern teams by Big-Data Experience Lab, Adobe. *2018*
- Among top 1% (300) students in India in Astronomy and Mathematics National Olympiads. *'10,'13,'14*
- Awarded KVPY Fellowship from Government of India. *2012*
- Awarded NTSE Scholarship from Government of India. *2009*

Responsibilities

- *Teaching Assistantship* - IIT Kharagpur
  - Digital Signal Processing - *Prof. Gautam Saha* *Autumn 2018*
  - Network Theory Lab - *Prof. Arijit De* *Spring 2019*
- *Reviewer* - BMVC 2020, CVPR 2022