Dripta S. Raychaudhuri

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RESEARCH INTERESTS Computer Vision, Deep Learning, Reinforcement Learning

My interests lie in the scope of reducing supervision in deep learning systems. Along these lines, my research includes few-shot target re-identification, domain adaptation and improving sample efficiency in deep reinforcement learning algorithms.

EDUCATION

University of California, Riverside, CA, USA

Sept 2018 - Present

PhD, Electrical and Computer Engineering Advisor: Dr. Amit K. Roy-Chowdhury

GPA: 3.97/4.0

Jadavpur University, Kolkata, WB, India

Aug. 2014 - June 2018

Bachelor of Engineering, Electronics and Telecommunications Engineering

Advisor: Dr. Ananda S. Chowdhury

GPA: 9.37/10.00

EXPERIENCE

Research intern

June 2020 - Sep. 2020

Mitsubishi Electric Research Laboratories (MERL)

Cambridge, MA, USA

Advisor: Dr. Jeroen van Baar

• Transfer learning of policies: Domain adaptive imitation learning.

Graduate Student Researcher

April 2019 - Present

Video Computing Group (VCG)

University of California, Riverside

Advisor: Dr. Amit K. Roy-Chowdhury

• Reducing supervision in visual recognition models

- Cross-domain adaptation of policies using imitation learning
- Few-shot/semi-supervised learning of re-identification models
- Unsupervised domain adaptation

WISE Research Intern

May 2017 - July 2017

DAAD:German Academic Exchange Service

Universität Hildesheim

Advisor: Dr. Dr. Lars Schmidt-Thieme

• Channel masking for multivariate time series shapelets: Developed an algorithm for classifying multivariate time series via a shapelet learning scheme, using channel masks to automatically discount noisy channels.

Undergraduate Student Researcher

Aug. 2017 - June 2018

Imaging, Vision & Pattern Recognition Group

Jadavpur University

Advisor: Dr. Ananda S. Chowdhury

• Segmentation of aortic vessels: Active contours for identification and segmentation of aortic media-adventitia from fetal ultrasound images.

PUBLICATIONS

- Raychaudhuri, D.S.*, Paul, S.*, van Baar, J. and Roy-Chowdhury, A.K., 2021. CROSS-DOMAIN IMITATION FROM OBSERVATIONS. *International Conference on Machine Learning (ICML)*, 2021 [Long presentation] (* equal contribution)
- Ahmed, S.A.*, **Raychaudhuri, D.S.***, Paul, S.*, Oymak, S. and Roy-Chowdhury, A.K., Unsupervised Multi-Source Domain Adaptation Without Access to Source Data. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021 [Oral] (* equal contribution)
- Wang, X., Paul, S., **Raychaudhuri, D.S.**, Liu, M., Wang, Y. and Roy-Chowdhury, A.K., Learning Person Re-identification Models from Videos with Weak Supervision. *IEEE Transactions on Image Processing (TIP)*, 2021

• Raychaudhuri, D.S. and Roy-Chowdhury, A.K., Exploiting Temporal Coherence for Self-Supervised One-shot Video Re-identification. *European Conference on Computer Vision (ECCV)*, 2020

PREPRINT/IN SUBMISSION

- Nag, S.*, Raychaudhuri, D.S.*, Paul, S. and Roy-Chowdhury, A.K., 2021. LEARNING FEW-SHOT OPEN-SET CLASSIFIERS USING EXEMPLAR RECONSTRUCTION. (*denotes equal contribution)
- Raychaudhuri, D.S., Grabocka, J. and Schmidt-Thieme, L., 2017. CHANNEL MASKING FOR MULTIVARIATE TIME SERIES SHAPELETS. arXiv preprint arXiv:1711.00812.

HONORS & AWARDS

- Dean's Distinguished Fellowship Award, University of California, Riverside
- DAAD-WISE Fellowship Award, Research intern

GRADUATE COURSEWORK

• Probabilistic Graphical Models • Introduction to Deep Learning • Advanced Computer Vision • Machine Learning • Information Theory • Stochastic Processes • State & Parameter Estimation Theory • Convex Optimization • Mathematical Methods in EE • Sparse Signal Processing

COMPUTER SKILLS

Python, Java, PyTorch, Matlab, OpenCV, sklearn

PROFESSIONAL SERVICES

- Reviewer of ICPR, ICCV
- Reviewer of TPAMI