Samyak Rawlekar

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Education

University of Illinois Urbana-Champaign — Illinois, USA
Ph.D. in Electrical and Computer Engineering — *Aug.* 2023 – *Ongoing*
Advisor: Prof. Narendra Ahuja

New York University — New York, USA
MS in Computer Engineering — *Sept.* 2021 – *May* 2023
Advisor: Prof. Yao Wang, Prof. Sumit Chopra

Indian Institute of Technology, IIT Dharwad — Dharwad, India
Bachelor of Technology in Electrical Engineering — *Aug.* 2017 – *May* 2021

Professional Experience

Computer Vision Research Intern: Multi-Modal Representation Learning — June 2022 – Sept 2022
NYU Langone Health - Dr.Cem Deniz, Dr.Sumit Chopra — *Manhattan, NY*

- Developed a joint **weakly and self-supervised based representation learning** model for medical images.
- Our approach proposed a novel fusion of images and clinical reports from MIMIC-CXR dataset.

Publications

Peer-reviewed conference papers

- **Rethinking Prompting Strategies for Multi-Label Recognition with Partial Annotations**
  Samyak Rawlekar, Shubhang Bhatnagar, Narendra Ahuja
  Under Review
- **Improving Multi-label Recognition using Class Co-Occurrence Probabilities**
  Samyak Rawlekar*, Shubhang Bhatnagar*, VP Srinivasulu, Narendra Ahuja
  International Conference on Pattern Recognition, **ICPR 2024** & CVPR Meta Food Workshop, **CVPRW 2024**
- **S3O: A Dual-Phase Approach for Reconstructing Dynamic Shape and Skeleton of Articulated Objects from Single Monocular Video**
  Hao Zhang, Fang Li, **Samyak Rawlekar**, Narendra Ahuja
  International Conference on Machine Learning, **ICML 2024**
- **Learning Implicit Representation for Reconstructing Articulated Objects**
  Hao Zhang, Fang Li, **Samyak Rawlekar**, Narendra Ahuja
  International Conference on Learning Representations, **ICLR 2024**
- **Feature Compression for Rate Constrained Object Detection on the Edge**
  Zhongzheng Yuan, **Samyak Rawlekar**, Siddharth Garg, Elza Erkip, Yao Wang
  Multimedia Information Processing and Retrieval, **IEEE MIPR 2022**
- **Radiology Reports Improve Visual Representations Learned from Radiographs**
  Haoxu Yuan, **Samyak Rawlekar**, Sumit Chopra, Cem Deniz
  Medical Imaging with Deep Learning, **MIDL 2023**

Journal Articles

- **Split Computing With Scalable Feature Compression for Visual Analytics on the Edge**
  Zhongzheng Yuan, **Samyak Rawlekar**, Siddharth Garg, Elza Erkip, Yao Wang
  IEEE Transactions on Multimedia, 2024
- **Improving performance of DL predictive models for COVID-19 by incorporating environmental parameters**
  Roshan Wathore, **Samyak Rawlekar**, Saima Anjum, Ankit Gupta, Hemant Bherwani, Nitin Labhasetwar, Rakesh Kumar
  Gondwana Research, 2022

Teaching and Research Positions

- Research Assistant with Dr. Narendra Ahuja, **CVRL, UIUC** — Aug 2023 - Ongoing
- Research Mentor, Promoting Undergraduate Research in Engineering (**PURE**), **UIUC** — Aug 2023 - Dec 2023
- Research Assistant with Dr. Sumit Chopra, **CILVR Lab, NYU** — Sept 2022 - May 2023
- Research Assistant with Dr.Yao Wang, **Video Lab, NYU** — Sept 2021 - May 2023
- Teaching Assistant Image and Video Processing, **NYU** — Jan 2023– May 2023
- Teaching Assistant Machine Learning, **IIT Dharwad** — Aug 2021– Nov 2021

Awards

- Recipient of the prestigious **Joan and Lalit Bahl Fellowship** - ECE Dept at UIUC. — Aug 2024 - May 2026
- **Academic Fellowship** - ECE Dept at UIUC — Aug 2023 - July 2024
- **Academic Fellowship** - Fully-funded Masters Program at NYU — Sept 2021 - May 2023

Technical Skills

Languages: Python, Matlab, C/C++
Software Tools: PyTorch, Linux, Vim, Slurm

Professional Service

Conference Review:

1. International Conference on Learning Representations (ICLR)
2. Winter Conference on Applications of Computer Vision (WACV)