# Pravin Nagar, Ph.D.

Postdoctoral Researcher University of Maryland, College Park pravinn@iiitd.ac.in https://pravin74.qithub.io/

Research Computer Vision, Video Analysis, Reinforcement Learning, Long Sequence Analysis,

Interests Transformer Networks, and Egocentric Vision

EDUCATION IIIT-Delhi, India

PhD, Computer Science and Engineering 2016–2022

Visvesvaraya Ph.D. Fellow (2016-2020)

Thesis: Analysing (Weeks) Long Egocentric Lifelogs

Advisor: Dr. Chetan Arora

IIIT-Allahabad, India

M.Tech., Information Technology 2012–2014

Thesis: Human Action Recognition Advisor: Dr. Anupam Agarwal

RGPV, Bhopal, India

B.Tech., Computer Science and Engineering 2007–2011

WORK University of Maryland, USA

Experience Postdoctoral Researcher Sep., 2022—Present

Research Project: Learning Grammar from Videos

PI: Dr. Abhinav Shrivastava

IIT Delhi, India

Junior Research Fellow Feb, 2021–Aug, 2022

Research Project: Learning from Egocentric Videos

PI: Dr. Chetan Arora

IIIT Delhi, India

Teaching Assistant Jan, 2016–Dec, 2019

Subjects: Machine Learning, Deep Learning, Advanced Computer Vision,

Advanced Machine Learning, Probabilistic Graphical Models

PSIT Kanpur, India

Assistant Professor Jul, 2014–Dec, 2015

Subjects: Artificial Intelligence, DBMS, and Software Engineering

Positions Of Reviewed Journals: PR'21 and IETE Journal of Research'20-21

RESPONSIBILITY Reviewed Conferences: CVPR'23, ICCV'23, ECCV'22, and ACM MM'20

Program Committee member of Workshop on User-Centric Narrative Jun, 2022

Summarization of Long Videos in conjunction with ACM MM 2022

Member of organizing committee for 'Intelligent Mar, 2013

Interactive Technologies and Multimedia (IITM)' conference

System Administrator, CVML lab, IIIT-Delhi Aug, 2018 - Dec, 2020

#### Ongoing

Pulkit Kumar, **Pravin Nagar**, Nirat Saini, and Abhinav Shrivastava. "Unsupervised Extraction of Grammar from Videos."

**Pravin Nagar**, Pulkit Kumar, and Abhinav Shrivastava. "BoundaryFormer: Unsupervised Generic Event Boundary Detection using Reinforcement Learning" Communicated to WACV 2024.

**Pravin Nagar**, and Chetan Arora. "SEMA: Semantic Attention for Capturing Long-Range Dependencies in Egocentric Lifelogs" Accepted in WACV 2024.

#### **PUBLICATIONS**

Pravin Nagar, Anuj Rathore, C. V. Jawahar, and Chetan Arora. "Generating Personalized Summaries of Day Long Egocentric Videos" *IEEE Transactions on Pattern Analysis and Machine Intelligence* (PAMI), 2021. (Impact Factor: 16.39)

**Pravin Nagar**, Mansi Khemka, and Chetan Arora. "Concept Drift Detection for Multivariate Data Streams and Temporal Segmentation of Daylong Egocentric Videos" *Proceedings of the 28th ACM International Conference on Multimedia (ACM MM)*, 2020.

Anuj Rathore\*, **Pravin Nagar\***, Chetan Arora, and C.V. Jawahar. "Generating 1 Minute Summaries of Day Long Egocentric Videos" *Proceedings of the 27th ACM International Conference on Multimedia (ACM MM)*, 2019. (\* both authors contributed equally)

Sagar Verma, **Pravin Nagar**, and Chetan Arora. "Making third person techniques recognize first-person actions in egocentric videos" 25th IEEE International Conference on Image Processing (ICIP), 2018.

Pulkit Kumar, **Pravin Nagar**, Anubha Gupta and Chetan Arora. "U-Segnet: fully convolutional neural network based automated brain tissue segmentation tool" 25th IEEE International Conference on Image Processing (ICIP), 2018.

### SKILLS

## Tools and Technologies

PyTorch, Tensorflow, Matlab, OpenCV, Pandas, SciPy.

## **Programming Languages**

Python, Java, C, C++.

Awards &
ACHIEVEMENTS

IIIT Delhi nominated my Ph.D. dissertation for the A	CM India Doctoral	Sep, 2023
Dissertation Award 2023.		
Presented 'Generating Personalized Summaries of Day	Long Egocentric Videos'	Dec, 2021
at the Vision India session at ICVGIP'21.		
Presented my thesis work at Doctoral Symposium at I	CVGIP'21.	Dec, 2021
Secured first prize in student paper competition in a w	vorkshop organized by	Nov, 2021
LCS2 at IIITD.		
Delivered a Tensorflow tutorial in the summer school of	on AI Assisted Data Analytics	
(AIDA) organized by $IIITD$ .		Jul, 2020
Received Google Travel Grant for ACM MM 2019.		Oct, 2019
Received Visvesvaraya PhD fellowship (Govt. of India	).	Jul, 2016
Attended Summer School on Deep Learning for Comp	uter Vision at <i>IIIT Hyderabad</i> .	Jul, 2016

# REFERENCES

Dr. Abhinav Shrivastava	Dr. Chetan Arora	Dr. C. V. Jawahar
Assistant. Professor	Professor	Professor
UMD, College Park	IIT Delhi	IIIT Hyderabad
abhinav@cs.umd.edu	chetan@iitd.ac.in	jawahar@iiit.ac.in