Pravin Nagar, Ph.D.

Postdoctoral Researcher
University of Maryland, College Park

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https://pravin74.github.io/

Research Interests	**Computer Vision, Video Analysis, Reinforcement Learning, Long Sequence Analysis, Transformer Networks, and Egocentric Vision**

Education

IIIT-Delhi, India   2016–2022
PhD, Computer Science and Engineering
Visvesvaraya Ph.D. Fellow (2016-2020)
Thesis: Analysing (Weeks) Long Egocentric Lifelogs
Advisor: Dr. Chetan Arora

IIIT-Allahabad, India   2012–2014
M.Tech., Information Technology
Thesis: Human Action Recognition
Advisor: Dr. Anupam Agarwal

RGPV, Bhopal, India   2007–2011
B.Tech., Computer Science and Engineering

Work Experience

University of Maryland, USA   Sep, 2022–Present
Postdoctoral Researcher
Research Project: Learning Grammar from Videos
PI: Dr. Abhinav Shrivastava

IIT Delhi, India   Feb, 2021–Aug, 2022
Junior Research Fellow
Research Project: Learning from Egocentric Videos
PI: Dr. Chetan Arora

IIIT Delhi, India   Jan, 2016–Dec, 2019
Teaching Assistant
Subjects: Machine Learning, Deep Learning, Advanced Computer Vision,
Advanced Machine Learning, Probabilistic Graphical Models

PSIT Kanpur, India   Jul, 2014–Dec, 2015
Assistant Professor
Subjects: Artificial Intelligence, DBMS, and Software Engineering

Positions Of Responsibility

Reviewed Journals: PR'21 and IETE Journal of Research'20-21
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" In preparation.

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

PUBLICATIONS   **Pravin Nagar**, and Chetan Arora. "SEMA: Semantic Attention for Capturing Long-Range Dependencies in Egocentric Lifelogs" IEEE Winter Conference on Applications of Computer Vision (WACV), 2024.

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 *ACM India Doctoral Dissertation Award 2023.*	Sep, 2023
Presented 'Generating Personalized Summaries of Day Long Egocentric Videos' at the *Vision India session* at *ICVGIP'21.*	Dec, 2021
Presented my thesis work at Doctoral Symposium at *ICVGIP'21.*	Dec, 2021
Secured first prize in student paper competition in a workshop organized by *LCS2* at *IIITD.*	Nov, 2021
Delivered a Tensorflow tutorial in the summer school 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 Computer Vision at *IIIT Hyderabad.*	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