

Sauradip Nag

DEEP LEARNING RESEARCHER · SOFTWARE DEVELOPER

SH-XX, Stag Hill Court, University of Surrey, Guildford, GU2 7GJ, United Kingdom

✉ s.nag@surrey.ac.uk | 🏠 <https://sauradip.github.io/> | 📧 sauradip | 🌐 sauradip-nag | 🎓 google-scholar

Education

University of Surrey

Guildford, United Kingdom

DOCTORATE OF PHILOSOPHY (PHD) IN ELECTRICAL ENGINEERING

Jul 2020 - Jul 2023 (Expected)

- Supervisor: Prof. Tao Xiang, Prof. Yi-Zhe Song and Dr. Xiatian Zhu
- Thesis: Annotation Efficient Multi-Modal Video Understanding
- Funding: iFlyTech Research Inc

Kalyani Government Engineering College

West Bengal, India

BACHELOR OF TECHNOLOGY (B.TECH) IN COMPUTER SCIENCE AND ENGINEERING

Aug. 2014 - Aug 2018

- Supervisor: Prof. Kaushik Dasgupta and Mr. Tamojit Chatterjee
- Thesis: Interacting with Softwares using Gestures
- Grade: 8.26 CGPA /10 (Among top 20 in Class)

Research and Work Experience

Indian Institute of Technology Madras

Madras, India

PROJECT ASSOCIATE IN VPLAB AND CAIR,DRDO

July 2018 - July 2020

- Supervisor : Prof. Sukehndu Das, Prof Kaushik Mitra and Prof. Balaraman Ravindran
- Project: Worked on Visual SLAM and Semantic Segmentation for IMPRINT Project of finding hidden location from scene
- Publication : Published 1 paper (top 10% paper) as first author

Indian Statistical Institute Kolkata

Kolkata, India

RESEARCH ASSOCIATE IN CVPR UNIT

July 2016 - July 2018

- Supervisor : Prof. Umapada Pal and Prof. Paliahnakhote Shivakumara
- Project: Worked on Video Scene Text Detection and Handwritten Document Analysis
- Publication : Published 4 papers (2 conference + 2 journal) three as first author

GISCLE Systems

Bangalore, India

COMPUTER VISION INTERN

Jan 2018 - April 2018

- Collaborator : Heba Tallah Maghoub
- Project: Worked on Advance Lane Detection System for Autonomous Cars in India
- Contribution : Developed Lane Detection System using Deep Learning, Object Detection Module for Drivers

Apnastudy Technologies Inc

Kolkata, India

SOFTWARE DEVELOPER INTERN

Feb 2016 - June 2017

- Collaborator : Shibaji Ray, Soumya Kundu, Dipendu Das
- Project: Worked on Artificial Intelligence based Learning Management Systems for Online Classes
- Contribution : Contributed in the website (apnastudy.com) UI and integrated Node.js Backend with the Angular.js Frontend

Research Interest

Few Shot Learning Transductive, Inductive, Zero-Shot, Generalized, Incremental/Continual and LifeLong Learning

Computer Vision Action Recognition and Localization, Semantic Segmentation, Video Summarization, Future Prediction

Multi-Modal Learning Video, Audio, Text/Caption, Image and its intermediate representation to solve low-level tasks

Other Interests Self-Supervised, Unsupervised and Weakly-Supervised Learning, Knowledge Distillation, Reinforcement Learning

Selected Publication(s)

PersonalTailor: Reconstructing Personalized Sewing Pattern Structures from 3D Point Clouds of Garments

Under Submission

IEEE/CVF COMPUTER VISION AND PATTERN RECOGNITION (CVPR)

November 2022

- Authors : Anran Qi*, Sauradip Nag*, Xiatian Zhu, Takeo Igarashi

Multi-Modal Few-Shot Temporal Action Detection via Vision-Language Meta-Adaptation

Under Submission

IEEE/CVF COMPUTER VISION AND PATTERN RECOGNITION (CVPR)

November 2022

- Authors : Sauradip Nag, Mengmeng Xu, Juan Perez Rua, Xiatian Zhu, Bernard Ghanem, Yi-Zhe Song, Tao Xiang

Post-processing Temporal Action Detection

IEEE/CVF COMPUTER VISION AND PATTERN RECOGNITION (CVPR)

• Authors: **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

Under Submission

November 2022

Zero-Shot Temporal Action Detection via Vision-Language Prompting

EUROPEAN CONFERENCE ON COMPUTER VISION (ECCV), TEL AVIV

• Authors: **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

H5-Index - 187

March 2022

Semi-Supervised Temporal Action Detection with Proposal-Free Mask Learning

EUROPEAN CONFERENCE ON COMPUTER VISION (ECCV), TEL AVIV

• Authors: **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

H5-Index - 187

March 2022

Proposal-Free Temporal Action Detection using Global Segmentation Mask Learning

EUROPEAN CONFERENCE ON COMPUTER VISION (ECCV), TEL AVIV

• Authors: **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

H5-Index - 187

March 2022

How Far Can I Go ? : A Self-Supervised Approach for Deterministic Video Depth Forecasting

MACHINE LEARNING FOR AUTONOMOUS DRIVING WORKSHOP, NEURIPS

• Authors: **Sauradip Nag***, Nisarg Shah*, Anran Qi*, R Ramachandra

H5-Index - 245

October 2021

Few-Shot Temporal Action Localization with Query Adaptive Transformer

BRITISH MACHINE VISION CONFERENCE (BMVC), VIRTUAL

• Authors: **Sauradip Nag**, Xiatian Zhu, Tao Xiang

H5-Index: 66

October 2021

An Episodic Learning Network for Text Detection on Human Bodies in Sports Images

IEEE TRANSACTIONS ON CIRCUIT SYSTEMS AND VIDEO TECHNOLOGY (T-CSVT)

• Authors: P Chowdhury, P Shivakumara, R Raghavendra, **Sauradip Nag**, U Pal, T Lu, D Lopresti

Impact Factor: 4.7

June 2021

A New Unified Method for Detecting Text from Sports Players in Video

PATTERN RECOGNITION (PR), ELSEVIER

• Authors: **Sauradip Nag**, P Shivakumara, U Pal, T Lu, M Blumenstein

Impact Factor: 7.6

April 2020

What's There in the Dark

IEEE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING (ICIP), TAIPEI

• Authors: **Sauradip Nag**, S Adak, S Das

H5-Index: 52

Apr 2019

Facial Micro-Expression Recognition using Time Contrasted Feature with Visual Memory

IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING (ICASSP), BRIGHTON

• Authors: **Sauradip Nag**, A Bhunia, A Konwer, P P Roy

H5-Index: 86

Jan 2019

Technical Skills

Programming	Basic C, Python, MATLAB, R, Java (J2SE, J2EE, J2ME), Javascript, HTML, CSS
Deep Learning Frameworks	Tensorflow, PyTorch, Keras
IDE	Node.js, Angular.js, Express.js, Twilio, Bootstrap LaTex, VisualStudio, PyCharm, MATLABStudio, RStudio, Atom

Courses Undertaken

Undergraduate Level	Datastructures, Database, Compiler Design, Artificial Intelligence, Networks, Operating Systems, Automata
Graduate Level	Advanced Datastructures and Algorithms, Computer Vision, Advanced Deep Learning

Honors & Awards

INTERNATIONAL

2022	1st Runners Up , Fine-grained Retrieval Challenge FGVC9 Workshop, CVPR	<i>New Orleans, USA</i>
2021	Oxford ML Summer School , Presented a talk on my past and current works on Video Understanding	<i>United Kingdom</i>
2020	PhD Scholarship , Awarded by IFLYTEK Research Inc and University of Surrey	<i>United Kingdom</i>
2019	Top 10% (Spotlight Paper) Award , Awarded for my paper "What's There in the Dark"	<i>Taiwan</i>
2018	Global Rank 71 , Rakuten Deep Learning Challenge	<i>India</i>

DOMESTIC

2018 **GATE CSE-2018**, Ranked among top 5% candidates out of 1,07,893 Candidates
2018 **Finalist**, Smart India Hackathon ISRO Theme (Vision) organized by Govt. of India and Dept. of Space

India
India

Professional Activity

2022 **Reviewer**, Neural Information Processing Systems (NeurIPS) *UK Zone*
2022 **Reviewer**, IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) *UK Zone*
2022 **Reviewer**, European Conference on Computer Vision (ECCV) *UK Zone*
2022 **Reviewer**, Asian Conference on Computer Vision (ACCV) *UK Zone*
2022 **Reviewer**, AAAI Conference on Artificial Intelligence (AAAI) *UK Zone*
2022 **Reviewer**, IEEE Transactions on Circuit Systems and Video Technology (T-CSVT) *UK Zone*
2022 **Reviewer**, IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI) *UK Zone*