

# Manogna Sreenivas

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## EDUCATION

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### Indian Institute of Science

*PhD in Electrical Engineering, CGPA: 9.0/10.0*

Bengaluru, India

*Oct 2020-Present*

### National Institute of Technology Karnataka

*B.Tech in Electrical and Electronics Engineering, CGPA: 8.72/10.0*

Surathkal, India

*Aug 2013- Apr 2017*

### R.V. P.U. College

*Karnataka Pre University Board Examination, Score: 94.3%*

Bengaluru, India

*June 2011- Apr 2013*

## RESEARCH WORK

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- **Unsupervised Domain Adaptation:** Designing methods to learn using labeled source along with unlabeled target domain data to obtain robust representations generalizing across domains.
- **Cross-Domain Few Shot Learning:** Designing effective methods capable of adapting a base model to an unseen task from an unseen domain given limited training samples.
- **Source-Free Domain Adaptation:** The objective is to adapt a model trained on a source domain to a target domain using only unlabelled samples.
- **Test-Time Adaptation:** The goal is to adapt a source trained model to a test domain in an online manner.

## PUBLICATIONS

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- **pSTarC: Pseudo Source Guided Target Clustering for Fully Test-Time Adaptation**, Manogna Sreenivas, Goirik Chakrabarty, and Soma Biswas, *Preprint, Under review* [\[Paper\]](#)
- **A Simple Signal for Domain Shift**, Goirik Chakrabarty, Manogna Sreenivas, and Soma Biswas, *ICCVW 2023*
- **SATA: Source Anchoring and Target Alignment Network for Continual Test Time Adaptation**, Goirik Chakrabarty, Manogna Sreenivas, and Soma Biswas, *Preprint, Under review* [\[Paper\]](#)
- **Similar Class Style Augmentation for Efficient Cross-Domain Few-Shot Learning**, Manogna Sreenivas and Soma Biswas, *CVPRW 2023* [\[Paper\]](#)
- **JumpStyle: A Framework for Data-Efficient Online Adaptation**, Aakash Singh, Manogna Sreenivas, and Soma Biswas, *ICLRW 2023* [\[Paper\]](#)
- **Improved Cross-Dataset Facial Expression Recognition by Handling Data Imbalance and Feature Confusion**, Manogna Sreenivas, Sawa Takamuku, Soma Biswas, Aditya Chepuri, Balasubramanian Vengatesan, Naotake Natori, *ECCVW 2022* [\[Paper\]](#)

## TEACHING EXPERIENCE

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### E9241 Digital Image Processing

*Teaching Assistant, IISc*

Bengaluru, India

*July 2023 - Present*

### E9246 Advanced Image Processing

*Teaching Assistant, IISc*

Bengaluru, India

*Jan 2023 - Apr 2023*

### Mathematics for Machine Learning

*Teaching Assistant, PES University*

Bengaluru, India

*Jan 2023 - Apr 2023*

### E9241 Digital Image Processing

*Teaching Assistant, IISc*

Bengaluru, India

*July 2021 - Dec 2021*

### Deep Learning for Computer Vision

*Teaching Assistant, NPTEL*

Bengaluru, India

*July 2022 - Oct 2022*

## WORK EXPERIENCE

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### PathPartner Technology

*Software Engineer*

Bengaluru, India

*July 2017 – August 2020*

- **Face Detector for Driver Monitoring System:** Developed a custom CNN based Face Detector, ported and integrated into an SDK with support for hardware platforms from Intel, ARM, Qualcomm, Cadence etc.
- **Porting Deep Learning models to edge devices:** Used toolkits like SNPE, OpenVINO, ArmNN to port models trained in TensorFlow/PyTorch to their respective hardware.
- **DSP Optimization:** Developed SIMD vectorized algorithms using intrinsics to support TensorFlow APIs on Cadence Tensilica Vision DSPs.

### Wipro Technologies

*Intern*

Bengaluru, India

*April 2016 – June 2016*

- **Pedestrian Detection:** Explored classical feature extraction methods like HOG along with SVM classifier to perform pedestrian detection. This work was done as a part of *Wipro Autonomous Vehicle* project.

## TECHNICAL SKILLS

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**Programming Languages:** C, Python

**Libraries:** OpenCV, PyTorch, TensorFlow

## RELEVANT COURSEWORK

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Matrix Theory, Stochastic Models and Applications, Digital Image Processing, Advanced Image Processing, Pattern Recognition and Neural Networks, Advanced Deep Learning

## CERTIFICATIONS

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- [Machine Learning](#) by Stanford University on Coursera, Jan 2016.
- [Deep Learning Specialization](#) by deeplearning.ai on Coursera, Feb 2020.
- Reinforcement Learning by Center for Continuing Education, IISc, May 2020.

## ACHIEVEMENTS

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- Recipient of the Prime Minister's Research Fellowship (PMRF), Jan 2022 - Present.
- Member of the winning team, Bosch Ideation Contest conducted as a part of Bosch Day, 2016 at NITK.
- Secured a state rank of 254 in Joint Entrance Exam (JEE) Mains, 2013
- Secured a rank of 172 in Karnataka Common Entrance Test (K-CET), 2013

## OTHER ACTIVITIES

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- Mentor at *Coached*, guiding B.Tech students from Tier-3 engineering colleges to prepare for job interviews.
- Member of *TechConnect*, PathPartner Technology, organising technical talks and events, Mar 2018 - Aug 2020.
- Institute Coordinator, *SPICMACAY*, Mangalore Chapter, Jul 2016 - Apr 2017.
- Executive Member, *Technites*, ENGINEER, NITK's annual technical fest, Oct 2014 - Oct 2016.