

Manogna Sreenivas

manognas@iisc.ac.in | manogna-s.github.io

EDUCATION

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

- **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 model to a test domain in an online manner.

PUBLICATIONS

- **pStarC: Pseudo Source Guided Target Clustering for Fully Test-Time Adaptation**, Manogna Sreenivas, Goirik Chakrabarty, and Soma Biswas, *WACV 2024* [Paper]
- **PhISH-Net: Physics Inspired System for High Resolution Underwater Image Enhancement**, Aditya Chandrasekar, Manogna Sreenivas, and Soma Biswas, *WACV 2024*.
- **SANTA: Source Anchoring Network and Target Alignment for Continual Test Time Adaptation**, Goirik Chakrabarty, Manogna Sreenivas, and Soma Biswas, *Accepted at Transactions in Machine Learning Research (Oct 2023)* [Paper]
- **A Simple Signal for Domain Shift**, Goirik Chakrabarty, Manogna Sreenivas, and Soma Biswas, *Visual Continual Learning, ICCVW 2023* [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

Mathematics for Machine Learning

Visiting Faculty, PES University

Jan-Apr 2023

E9246 Advanced Image Processing

Teaching Assistant, IISc

Jan-Apr 2023

E9201 Digital Signal Processing

Teaching Assistant, IISc

Aug-Dec 2022, 2023

E9241 Digital Image Processing

Teaching Assistant, IISc

Aug-Dec 2022, 2023

Deep Learning for Computer Vision

Teaching Assistant, NPTEL

Aug-Oct 2022

WORK EXPERIENCE

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

Programming Languages: C, Python

Libraries: OpenCV, PyTorch, TensorFlow

RELEVANT COURSEWORK

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

CERTIFICATIONS

- [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

- 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

- 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.