Manogna Sreenivas

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EDUCATION

Indian Institute of Science — Bengaluru, India
PhD in Electrical Engineering, CGPA: 9.0/10.0 — *Oct 2020-Present*

National Institute of Technology Karnataka — Surathkal, India
B.Tech in Electrical and Electronics Engineering, CGPA: 8.72/10.0 — *Aug 2013- Apr 2017*

R.V. P.U. College — Bengaluru, India
Karnataka Pre University Board Examination, Score: 94.3% — *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.

PUBLICATIONS

- **Improved Cross-Dataset Facial Expression Recognition by Handling Data Imbalance and Feature Confusion**, *European Conference on Computer Vision Workshops (ECCVW), 2022* [Paper] [Code]

TEACHING EXPERIENCE

E9246 Advanced Image Processing — Bengaluru, India
Teaching Assistant, IISc — *Jan 2023 - Apr 2023*

Mathematics for Machine Learning — Bengaluru, India
Teaching Assistant, PES University — *Jan 2023 - Apr 2023*

E9241 Digital Image Processing — Bengaluru, India
Teaching Assistant, IISc — *July 2021 - Dec 2021*

Deep Learning for Computer Vision — Bengaluru, India
Teaching Assistant, NPTEL — *July 2022 - Oct 2022*

WORK EXPERIENCE

PathPartner Technology — Bengaluru, India
Software Engineer — *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 intrisics to support TensorFlow APIs on Cadence Tensilica Vision DSPs.

Wipro Technologies — Bengaluru, India
Intern — *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
- Secured a grade of 10/10 in Class 10, appreciated with a Certificate of Merit from CBSE Board.
- Secured 1st prize in State level GELS Olympiad organized by GELS Abacus Academy, 2007.

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.