

Naren Doraiswamy

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#63, 3RD CROSS, VHBCS, RAJARAJESHWARINAGAR

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Research Experience:

IACV lab, Indian Institute of Science

Deep Learning and Computer Vision Research Assistant

Aug 2018 – Present

- Worked on few shot Semantic segmentation to segment unseen novel classes.
- Worked on developing a few shot semi-supervised domain adaptation algorithm from active learning perspective.
- Working on developing efficient algorithms semi-supervised and universal domain adaptation methods.

Student Satellite Program, Indian Space Research Organization

Research Intern

Jan 2015 - July 2015

- Worked on implementing the kalman filter to obtain better estimates of gyro sensors.
- Worked on implementing extended kalman filter for attitude control of the satellite.

Publications:

Weakly Supervised Few-shot Object Segmentation using Co-Attention with Visual and Semantic Inputs.

Mennatullah Siam*, Naren Doraiswamy*, Boris Oreshkin*, Hengshuai Yao, Martin Jagersand.

IJCAI 2020 (**Acceptance Rate: 12.6%**)

One-Shot Weakly Supervised Video Object Segmentation.

Mennatullah Siam*, Naren Doraiswamy*, Boris Oreshkin*, Hengshuai Yao, Martin Jagersand.

ICLR PML4DC workshop 2020

Active learning for few shot semi-supervised domain adaptation.

Naren Doraiswamy*, Titir Dutta, Soma Biswas, Sawa Takamuku, Aditya Chepuri, Balasubramanian Vengatesan, Naotake Natori. (Under review)

In Preparation:

- **Manifold co-teaching for semi-supervised domain adaptation**
- **Universal domain adaptation using self-supervision.**

Work Experience:

Robert Bosch, India

Associate Software Engineer

Aug 2016 – July 2018

- Worked in developing data based models in component model team for engine management systems.
- Developed Machine learning models for key engine parameter estimations like common rail pressure, turbo-charger lag which were used in Vehicle simulation modules.
- Initiated the development of inference model for Cylinder fill correction factor using calibrated data from OEMs.
- Also worked on model predictive control systems for developing the HiL models.
- Keynote speaker at Bosch Technical Forum.

Udacity Deep Learning Mentor and Code Reviewer

January 2018 - Present

- Providing actionable and helpful feedback to student projects in their code development.
- Advice on technical topics, explanation of incorporating and building efficient deep learning models.

Education:

RNS Institute of Technology, Bangalore

Bachelors' of Engineering(Honors) in Electronics and Communication,

August 2012- June 2016

- Percentage: 79.14%.(Top 5% in class) Converted GPA(According to WES): 3.79/4.0

Thesis: A numerical framework for GPR feature extraction and simulation using FDTD algorithm.

SBM Jain College, Bangalore
Pre-University Education, Class 12,
• Percentage: 94.68%.

June 2010- Mar 2012

Non degree Education

Computer Vision Foundation Nanodegree	March 2018-May 2018
Machine Learning Engineer Nanodegree	July 2017 – Feb 2018
Deep Learning Foundation Nanodegree	Jan 2017– July 2017

Skills:

Programming skills:

- Python, C, C++, Matlab, Bash.

Toolkits/Packages:

- Pytorch, Tensorflow, OpenCV, Caffe

Awards and Honors:

- Ministry of human resource development scholarship [MHRD], Govt. of India.
- Social welfare Scholarship.
- International Science Olympiad Finalist 2012.
- Jnanamitra Pratibha Puraskara award for outstanding performance in 10th Board Examination.

Extracurricular activities:

- District level football player.
- President of the science and literary club in School.

Volunteer Experience:

- **AI AMBASSADOR @ Nurture.ai:** I teach deep learning every Saturday at a community meetup and aim towards building a passionate and efficient AI community in the city.
- **Bosch CSR group:** Part of the group which taught mathematics and science classes for underprivileged high school kids.
- **MUST Research Club:** Part of the enthusiastic AI non-profit group headed by the principal researcher of Salesforce, India which holds seminars, panel discussions and classes about AI.