CURRICULUM VITAE

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Summary: Deep Learning/Speech Synthesis and Computer Vision Researcher

EDUCATION
- PhD. Mechanical Engineering (2010)
  University of Maryland College Park
- Bachelor and master of Technology Chemical Engineering (2005)
  Indian Institute of Technology Madras, India (IITM)

EXPERIENCE
Research Scientist, Ford Motor Company, Palo Alto   *Apr-2016-present*
- **Unsupervised domain adaptation with generative models (VAE/GANs/seq2seq)**
  - Domain adaptation problems: image to depth, simulation to real
  - VAEs/GANs form backbone with various kinds of losses
  - Paper accepted at **ICRA 2019**: https://arxiv.org/abs/1902.02086
  - Paper accepted at **NeurIPS** workshop 2019: https://arxiv.org/abs/2001.09257
  - Unsupervised Video2Video domain adaptation with seq2seq models
- **Attention based seq2seq models for speech synthesis/voice conversion**
  - Tacotron setup
  - ArXiv link: https://arxiv.org/abs/1907.07769
- **Mapping and Localization**
  - **Accelerated Point Cloud Processing by 10X (C++) in CUDA**
  - Concepts - SLAM, LiDAR, machine learning.
  - Use of parallel and GPU computing ideas such as correct implementation of atomics, reduction and exposing parallelism from algorithm.
  - Paper in preparation
- **Radar/Camera fusion**
  - Paper accepted at **CVPR 2021**

Applied Engineer, NVIDIA, Santa Clara   *Apr 2012-Apr 2016*
- **Development of parallel computing applications (plasma, combustion, etc.)**
  - Plasma code accelerated by 5X, scales to 8000 supercomputer nodes
- **InSitu visualization (compositing) application benchmark in OpenGL**

Postdoctoral Researcher
Lawrence Berkeley National Laboratory, Berkeley   *Aug 2010-Apr 2012*
- **Performance analysis and optimization of HPC plasma codes in supercomputing center**
- **Cluster benchmarking and workload analysis**

Recent Publications
- Hierarchical Sequence to Sequence Models for Voice Conversion with Limited Data: **Praveen Narayanan**, Punarjay Chakravarty, Francois Charette, Gint Puskorius: https://arxiv.org/abs/1907.07769
- NeurIPS workshop: Sim2real domain adaptation with GANs: Nikita Jaipuria, Shubh Gupta, **Praveen Narayanan,** Vidya N Murali: https://arxiv.org/abs/2001.09257
- GEN-SLAM: Generative Models for Monocular Simultaneous Localization and Mapping: Punarjay Charkravarty, **Praveen Narayanan** and Tom Roussel (**Accepted at ICRA 2019**): https://arxiv.org/abs/1902.02086
- CVPR 2021 Radar-Camera fusion (to be announced)
- Self-supervised voice conversion with limited data: Poster accepted at **EEML summer school 2021**

Intellectual Property
- **12 Patents as of May 2021 (see google scholar page)**

Reviewing Experience
> **Reviewer for CVPR 2021 - Outstanding Reviewer Award (http://cvpr2021.thecvf.com/node/184)**
> **Reviewer for ICLR 2021 - Outstanding Reviewer Award (https://iclr.cc/Conferences/2021/Reviewers)**
> Reviewer for NIPS 2018 - **Top 30 % of reviewers**
> Reviewer for ICLR 2019
> Reviewer for ICML 2019
> Reviewer for ICRA 2019
> Reviewer for UAI 2019
> Reviewer for NeurIPS 2019
> Reviewer for ICLR 2020
> Reviewer for AAAI 2020
> Reviewer for AAAI 2021
> Reviewer for UAI 2020
> Reviewer for UAI2021
> Reviewer for ICCV2021
> Reviewer for InterSpeech2021
> Reviewer for NeurIPS Autonomous Driving Workshop 2020
> Judge: SC14 Student poster Competition