Sriharsha Annamaneni

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SKILLS

- Python, C++, MATLAB,
- Pytorch, Tensorflow, Keras
- OpenCV, Sci-Kit Learn, spacy, OpenVINO Pomegranate, Spark
- Visualization: Matplotlib & Plotly
- Database: SQL & PostgreSQL

INTERESTS

- Computer Vision
- Machine Learning
- Neural Model Compression
- Signal Processing
- Autonomous Navigation

EDUCATION

- **Florida Insitute of Technology**
  Msc. in Electrical Engineering
  2015-2016 |FL, USA 3.7/4.0
- **Manipal Insitute of Technology**
  B.E. in Electronics and Communication Engineering
  2010-2014 |KA, IN 7.0/10
  Thesis: *Data Compression of Magnetic Flux Leakage Signals*
  - Developed a novel three stage algorithm for online of compression of Magnetic Flux Leakage signals that are acquired in inspection of oil and gas pipelines

MOOCs

- EECS 498/598: Deep Learning for Computer Vision
- **Machine Learning**, by Andrew Ng, on Coursera.
- Intel Edge AI for IOT Developers by Udacity
- AI for Healthcare by Udacity
- IIIT Summer Schools -2018, 2019

Work Experience

Oct,2019-Present **Research Engineer** — ***Sirena Labs***, Bangalore

- Wake up word detection, Built an offline trigger word detector using Time Delay Neural Networks
- Face Recognition and Verification, Built a Deep Neural Network for recognizing facial images captured by a camera, compare it with the images in the database and retrieve information of the detected person
- Automatic Speech Recognition, Built a Robust ASR model for Indian English using existing ASR architecture Deepspeech2

Sept, 2017 – May. 2019 **Research Fellow** — ***CVIT Lab, IIIT***, Hyderbad

- Worked on application level problems in deep learning and computer vision.
- studied the effectiveness of grouped, shuffled and depth-wise separable convolutions techniques on a real-time semantic segmentation architecture like ERFNet for improving runtime by over 5X
- novel training procedure which starts out with a dense convolution but gradually evolves towards a grouped convolution. We show that our proposed training method and efficient architecture design can improve accuracies by over 8% with depthwise separable convolutions applied on ERFNet

Publications

Efficient Semantic Segmentation using Gradual Grouping

Nikitha Vallurapalli*, **Sriharsha Annamaneni***, Girish Varma*, CV Jawahar*, Manu Mathew, Soyeb Nagori , eprint arXiv:1806.08522
CVPR Workshop, 2018(oral), Best Runner-up Award

Development of antenna deployment circuit for nano-satellites

Pramath Keny*, Arya Menon*, Madhura Rao*, Urvang Gaitonde*, Animesh Gupta*, **Annamaneni Sriharsha*** European Conference on Circuit Theory and Design (ECCTD), 2013

Projects

Hippocampus Volume Quantification for Alzheimer's Progression

Built an end-to-end AI system which features a machine learning algorithm that integrates into a clinical-grade viewer and automatically measures hippocampal volumes of new patients, as their studies are committed to the clinical imaging archive.

Image-Denoising-Using-Conditional-GAN

Given the original and degraded versions of a few images. Built a conditional GAN to fix the degraded images

2012-2013 **Parikshit Student Satellite Team** — *Manipal*

Programmed cc1101 and ADF7021-N Transceivers using MSP430 microcontroller will be used for onboard satellite communication