Gokkulnath Thirukonda Srinivasan

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Personal Website **Github**

Research Interest : Adversarial Machine Learning, Deep Learning & Computer Vision

EDUCATION BACKGROUND

Amrita University **Coimbatore, India**
B.Tech, Electronics and Communication Engineering *Jun. 2013-May. 2017*
GPA: 8.68/10

Maharishi International Residential School (MIRS) **Sriperumbudur, India**
CBSE XII *Jun. 2011-May. 2013*
Aggregate: 90.8%

PROFESSIONAL EXPERIENCE

Software Development Engineer **Bangalore, India**
Ericsson *Sept. 2017-Dec. 2019*

- Handled automation and tool development activities for SIP protocol based Toll Free and Interactive Voice Response systems. Involved in the Development of Traditional NLP based Log Analytics Tool.
- Extensively used Python, Flask, AWS, REST API, Git and Machine Learning to improve software quality and drive testing efficiency.

Software Engineering Intern **Bangalore, India**
Ericsson *Apr. 2017-Sept. 2017*

- Test automation for service assurance and system integration testing team which handles life cycle management of VNF workloads. Handled API Automation, Web GUI Automation efforts.
- **Tools Used:** Python, Selenium, Robot framework, Openstack and various Ericsson cloud platforms like ECM, EOC etc.

Research Intern **Chennai, India**
HTIC, IIT Madras Research Park *May. 2016-July. 2016*

- Developed low-cost activity recognition models for wearable devices based on Support Vector Machine (SVM), Decision Tree using IMU Sensor data. **Project Report**
- **Tools Used:** MATLAB, Python, Scikit-learn and LIBSVM.

RELEVANT SKILLS & COURSEWORK

- **Skills** : C, Python, Keras, Unix, Tensorflow, Pytorch, Scikit-learn
- Deep Learning Specialization (Coursera)
- TensorFlow in Practice Specialization (Coursera)
- Pratical Deep Learning for Coders - Fast.AI (V2 & V3)
- Deep Learning from the Foundations - Fast.AI V3

SELECTED PROJECTS

Face Aging using GAN [Pytorch] ***Link***
- Achieved Face Aging Effect using CycleGAN. CycleGAN was used for learning to translate an image from a source domain X(Young) to a target domain Y(Old) and vice versa in the absence of paired examples.

NAG: Network Adversary Generator [Pytorch] ***Link***
- GAN like architecture with objective to train a generator network which attempts to capture the distribution of adversarial perturbations for any given classifier and readily generate wide variety of such perturbations.

Training on Tiny-Imagenet from Scratch [Using tf.keras and TPU] ***Link***
- The Objective was to learn the practical difficulties of training a model from scratch to attain accuracy reported by and try to surpass the reported State of the art Top-1 Accuracy.

Transfer Learning by Growing Samples/Labels [Fast.ai] ***Link***
- Tested the Hypothesis of Training Model in stages with the objective to train faster with less number of epochs
- Explored Two Approaches which include, Increasing the number of samples per class and increasing the number of classes based on hierarchy if available.

Naïve Meta-Learning Experiment For NN Architecture Search [Keras] ***Link***
- A Naïve approach to find an ideal Architecture using Random Search over a constrained search space using Keras.
- Uses random layer selection to create the Neural Network Architecture.

A Novel Clustered SVM with Reduced Support Vectors [MATLAB] ***Link***
- Reduction in number of Support Vector is essential because it reduces the computation complexity of the model, which in turn gives the user the ability to implement real time applications on low power computing devices and reduces hardware requirement.

PUBLICATIONS

- **Gokkul Nath T.S.**, Sudheesh P., Jayakumar M "Tracking Inbound Enemy Missile for Interception from Target Aircraft Using Extended Kalman Filter", in **SSCC 2016**, Security in Computing and Communications, Communications in Computer and Information Science, vol 625. Springer, Singapore. **Link**

VOLUNTEERING & TEACHING

- **AI Saturdays Ambassador - Cycle 1:** Hosted weekly Meetups to help people get started with deep learning and have healthy discussions.
- **Ericsson Internal Trainer** for Machine Learning and Python Competence development. Trained more than 50 Colleagues and enabled them to apply machine learning to Telecom and IT industry.

AWARDS & ACHIEVEMENTS

- Ericsson Impact AWARD - 2018 from Head of BA Managed Services **Email** *Mar. 2019*
- 1 out 15 Top performers for 2018-2019 in BMAS SA MS IT & ADM Unit. *Feb.2019*
- AI Saturdays : Ambassador for Bangalore Chapter : **Testimonial** *Jan.2018*
- Fast.AI international Fellow *Oct.2017*