Subhashree Radhakrishnan

Curriculum Vitae

3500 B,Fox-ridge Apartments
VA-24060
United States
+1 (540) 449 8954
subha@vt.edu
www.linkedin.com/in/subhashree-radhakrishnan-b0b0048b
https://github.com/subhashreeradhakrishnan

Objective

Seeking Summer Internship position pertinent to the fields of Computer Vision, Machine/ Deep Learning, Natural Language processing and Artificial Intelligence

Education

2016–2018 **Masters in Computer Engineering** , *Virginia Polytechnic Institute and State University*, Blacksburg, ***3.6***/*4*.
Courses(sem1): Artificial Intelligence,Computer Vision, Advanced Machine Learning
Courses(sem2): Advanced Computer Vision, Object Oriented Software Development

2012–2016 **Bachelor in Electrical and Electronic Engineering**, *Amrita School Of Engineering*, Coimbatore,India, ***9.26***/*10*.
- Was awarded the **Outstanding Student Award** for 2014-2015
- Secured Academic proficiency award for topping the department [2013-2015]

Technical Skill-set

Software Modules/packages: Caffe, Theano, Tensorflow, OpenCV, Sci-kit, Hadoop, Labview, MATLAB, Energia
Platforms worked: Raspberry pi,MSP430, Aurdino, GPS Module,Beagle Bone Black,Beagle Board,SPI and I2C protocols, Internet Of Things, Git
Programming: C,C++,Python,R Language
Certifications: Data Structures and Algorithms on Coursera by University of California, San Diego

Work Experience

Jan-May2017 **Graduate Teaching Assisstant – Virginia Tech, Blacksburg**.
- As part of my role, I conduct lab hours helping students with their microcontroller coding assignments. I review coursework and provide academic assistance to students. I run their codes, debug and provide constructive feedback

Projects

Spring 2017 **FUTURE ACTIVITY FORECASTING using LSTM –*Research Thesis under Prof.Jia Bin Huang***.
- This project aims in predicting the future action in a video given a sequence of frames. The goal is early prediction of a complex activity.
- A parallel is drawn with NLP for next sentence selection where every word is an action and sentence is analogous to Complex activity and a contextual LSTM is planned.

Spring 2017 **Semi-supervised Cyclic GAN for image to image translation –*Advanced Computer Vision Course*** .
- The project experimented a semi-supervised approach by adding few labelled images to training using the cyclic GAN architecture.

Fall 2016 **FIGHT DETECTION IN VIDEOS USING CONVOLUTIONAL NEURAL NETWORKS – *Project as a part of computer vision course***.
- Performance comparison of different feature extractions and classifiers including STIP, Optical flow and CNN. A pre-trained model of ResNet was used and used Theano.

Spring 2017 **KAGGLE IMAGENET CLASSIFICATION Contest – *Project***.
- Had achieved 93% accuracy on classification of three imagenet classes.
- Trained the model using Googlenet, VGG Net and Convnet models with additional changes such as adding batch normalization, Without pooling, Early stopping and hyperparameter tuning. Performance was highest by retraining the last layer of V3 inception network which was pre-trained on Imagenet.

Spring 2017 **MOTION PLANNING FOR DRONES –*A mini-project***.
- A coding challenge to navigate a drone on circular paths given start position, direction(anti-clockwise/clockwise), angle on the path and a destination, the least time taken by the drone to traverse is returned. Djiksar algorithm was used.

Fall 2016 **PACMAN PROJECT AI –*Course-project***.
- Built Pacman game involving minimax, alpha-beta pruning, expecti-max and reinforcement learning.

Fall 2016 **COMPUTER VISION –*Course Assignments***.
- Scene Classification using Bag of Words and SVM
- Camera pose estimation and visualization by marker estimation.
- Object Instance Recognition, Epi-polar, SFM projects

Other Experience

Feb-July2016 **DEVELOPING INTELLIGENT CONTROL AND AUTOMATED APPLICATIONS IN BIO-HYBRID SYSTEMS – Undergraduate Exchange Student, University Of Paderborn, Germany**.
- Automated Gardening system and day night cycle using Raspberry pi, rpi camera and RF modules
- Interfaced I2C, SPI sensors with stepper motors and artificial artefacts to simulate photo-tropism. Robotic Node prototype was developed to be interfaced in distributed bio-hybrid system and was monitored through IOT.
- Developed Intelligent Control Algorithm in Image Processing for tracking the motion of plant tip. This was fed to a neural network controller for further deciding the position of light to be switched ON for effectively controlling shape of plant.

May – July 2015 **SPEECH EMOTION RECOGNITION** ***–Summer Research Intern, Indian Institute Of Sciences India***.

- Devised a hybrid algorithm of LPC, LPCC, OSALPC, and LFCC and used GMM classifier for emotion recognition that achieved improved recognition rate.
- A GUI was developed for the same and implemented on beagle board through MATLAB Simulink interface.
- **PUBLICATION:** Paper titled **'Speech Emotion Recognition: Performance Analysis Based on Fused Algorithms and GMM Modelling'** published in Indian Journal Of Science and Technology (Scopus Indexed)