

Subhashree Radhakrishnan

Curriculum Vitae

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Objective

Seeking Summer Internship position pertinent to the fields of Computer Vision, Artificial Intelligence, Machine Learning, Algorithm development, Machine Perception and Embedded Systems.

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: Labview, MATLAB, Energia, Keil, OpenCV, Fritzing, Eagle, Latex, Py-Charm, Upstart, ZeroMQ, Crontab

Platforms worked: Raspberry pi, MSP430, Arduino, GPS Module, Beagle Bone Black, Beagle Board, SPI and I2C protocols, Internet Of Things, Git, RF modules, Image Processing, Speech Processing, PCB, sci-kit, Designing

Programming: C, C++, Python, R Language

Certifications: Data Structures and Algorithms on Coursera by University of California, San Diego

Relevant Experience

- Feb-July 2016 **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)

Projects

- Fall-Spring 2016 **FIGHT DETECTION IN VIDEOS USING CONVOLUTIONAL NEURAL NETWORKS – Project as a part of computer vision course.**
◦ Work involving theano framework and using optical flow density. Performance comparison of different feature extractions and classifiers including STIP, Optical flow and CNN.
- Spring 2017 **DISTRIBUTED COMPUTER VISION USING VIEW PLANNING IN COOPERATIVE UAVs – Project at Virginia Tech.**
◦ Work on implementing Next Best View algorithms to optimize the recognition task of UAV's. This work is in progress under prof. Dr. Ryan. K. Williams
- Spring 2017 **Video Thumbnail Generation Using LSTM – As part of Independent Study under Prof. Jia Bin Huang.**
- Fall 2015 **FAULT LOCATION DETECTION ON TRANSMISSION LINE – Senior Year Project.**
◦ Deployed STFT and DWT algorithms to locate fault on transmission Line in SMART GRID metering. Its implementation was carried out through DAQ using LabView interface.
◦ **PUBLICATION**: Paper titled '**Fault distance Identification in transmission line using STFT Algorithm**' published in the proceedings of IEEE International Conference on Computer Communication and Informatics
- Jan 2015 **WIRELESS SAFETY SYSTEMS IN TRAINS – Presented for semi finals Texas Innovation Challenge.**
◦ Developed a safety system using Beaglebone black and MSP430. Locating and communication was implemented with GPS and GSM modules.
- Fall 2014 **COPY CAT – Presented for finals in a Technical fest at National Institute of Technology (India).**
◦ A Line follower Robot with colour sensing, object detection ability and maze following skills built on MSP430 Launchpad that communicates optimized path calculated using Brute Force Algorithm to a Blind Bot through CC110L RF booster pack. Used Energia software.

Other skills

- Memberships IEEE-IES [2015-Present], Official Member of TOASTMASTERS
Leadership OFFICE BEARER SAE [2013-2015]

Social Activity Was ED-Support Volunteer at **MAKE A DIFFERENCE** organization tutoring Institutionalized Children
Communication WINNER of AMRITA BEST SPEAKER AWARD and REGIONAL FINALIST in ICTACT YOUTH TALK