Sairam Tabibu

5021 Brooklyn Avenue NE, #34, Seattle, WA - 98105

✉ stabibu@uw.edu　　🌐 tabibusairam.github.io　　🔗 sairamtabibu　　🐱 tabibusairam　　📞 +1 (206) 617-9736

Summary of Qualifications

Interests: Computer Vision, Machine Learning, Deep Learning, Artificial Intelligence
Software and Languages: Python, C++, C, R, Matlab, LaTeX
Embedded Platforms: Raspberry Pi, Arduino
Packages and Framework: Pytorch, Keras, Tensorflow, Numpy, Scikit-learn, OpenCV, MatConvnet

EDUCATION

University of Washington, Seattle — UW College of Engineering, *Seattle, WA*

Master of Science in Electrical and Computer Engineering　　　　　　　　　*Sept. 2019 – Mar. 2021 (expected)*
Selected coursework - Intro to Artificial Intelligence for mobile robots, Machine Vision, Machine Learning

Indian Institute of Technology(BHU), Varanasi, *Varanasi, India*　　　　　　　　　*GPA-3.5/4*
Bachelors of Technology in Electronics Engineering　　　　　　　　　*Jul. 2013 – May. 2017*

WORK EXPERIENCE

Deep Learning Program Mentor, *Great Learning*
Bangalore, India　　　　　　　　　*Nov. 2018 – May. 2019*
- Mentored working professionals by teaching them Computer Vision and Machine Learning concepts.
- Created assignments covering projects of Face and object detection and graded them.

Research Fellow, *IIIT, Hyderabad India*
Cancer detection and Survival Prediction using Deep learning　　　　　　　　　*Nov. 2017 – Mar. 2019*
- Spearheaded and developed a fully automated model which detected kidney Cancer and it's sub-types from tissue slide images (Gigapixel Images) using Deep learning. **Paper published in Nature Scientific reports.**
- Designed and Implemented a novel Directed Acyclic graph based SVM model to be used on top of Deep learning model to deal with Data Imbalance which increased the classification accuracy by 6-7%.
- Developed a survival prediction system (5 years) using a COX Regression model trained on the features extracted from the Deep Net without any human intervention.

Research Intern, *NTU, Singapore*
Infrared Image processing and vessel detection in Maritime Environment　　　　　　　　　*May. 2016 – Jul. 2016*
- Developed a automated Ship tracking system using IR cameras along the Singapore coastline with possible variations in orientation,shape, distance and surrounding effects. Project Report
- Improved the object detection system by implementing the Selective search method (Graph based object segmentation followed by grouping based based on location, shape, color of the object).
- Implemented and trained VGG nets on the IR images to extract relevant features and used SVM's for classification.

Research Intern, *Changwon National University, South Korea*
Real time Face recognition based on Embedded Systems　　　　　　　　　*May. 2015 – Jul. 2015*
- Spearheaded the project on improving and deploying a Real time face recognition algorithm on Embedded systems such as Raspberry Pi to be deployed as a low cost product. Project presentation
- Designed a system by implementing a model which extracted higher order Local derivative patterns from face and used Histogram matching for recognition.
- Improved upon the accuracy by using transforms such as Adaptive Histogram equalisation to bring illumination in-variance and increased the accuracy by 7-8%.

RESEARCH PROJECTS

Hand gesture Recognition on Indian Sign language
Guide: Dr. Kishor Sarwadekar, Assistant Professor, IIT BHU　　　　　　　　　*Dec. 2016 – May. 2017*
- Implemented a geometric based feature method to extract hand gesture removing any ring artifact.
- Designed a custom 5 layer Neural network for feature extraction and classification.

Lexical and visual analysis of social media posts
Guide: Dr. Erik Cambria　　　　　　　　　*Jan. 2017 – Apr. 2017*
- Spearheaded the project on developing a system to detect whether a social media post requires empathetic response.
- Designed and Implemented a pipeline to extract hand crafted features (both verbal and visual features) and used Logistic Regression and Random forest for classification achieving 80% accuracy. **Paper accepted in FLAIRS'17.**

Multi-modal analysis for deception detection
Guide: Dr. Erik Cambria　　　　　　　　　*Sep. 2016 – Dec. 2016*
- Developed a data-driven method for automatic deception detection in real-life trial data.
- Implemented an automated pipeline to extract the visual cues (face expressions, color attributes etc.) and verbal cues (utterances etc.) and did a Decision level fusion using SVM on top of these features for classification.
- Achieved an accuracy of 78% surpassing the Human level accuracy(58-60 %) by more than 15%. **Paper accepted in ICDM workshop'16.**