SUHAS BN

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EDUCATION

The Pennsylvania State University, University Park, PA *Aug 2019 - May 2021 (expected)*
MS in Electrical Engineering specializing in Signal & Image Processing

PES University, Bangalore, India *Aug 2014 - May 2018*
B.Tech in Electronics & Communication Engineering specializing in Signal Processing

WORK EXPERIENCE

Indian Institute of Science, Bangalore May 2018 - Aug 2019
Project Assistant *SPIRE Lab, Electrical Engineering Department*

• Collected and analyzed speech & video signals to classify ALS and Parkinsons' subjects from healthy controls. Paper presented at INTERSPEECH 2019, Austria. (DOI:10.21437/Interspeech.2019-1285)

• Assisted classification of patients with Obstructive Sleep Apnea (OSA) using Hidden Markov Models.

• Responsible for collecting speech data and SPIRE Lab alumni relations for the year 2018-19.

SKILLS

Languages MATLAB, Python, C, C++, Bash, SQL

Software & Tools Kaldi, Keras, Tensorflow, Numpy, SciPy, Matplotlib, OpenCV, Scikit-learn, LaTeX, Arduino, Git, FFmpeg

COURSEWORK

Graduate Level

• Neural Networks, Graphs & Algorithms, • Probability, Random Variables & Stochastic Processes, • Emerging Topics in Networking, • Wavlets & Sparse Signal Processing, • Convex Optimization, • Digital Image Processing II

Undergraduate Level

• Linear Algebra, • Digital Signal Processing, • Computer Vision, • Pattern Recognition & Classification, • Fuzzy Systems, • Research Methodology, • Artificial Neural Networks

PROJECTS

Real Time Condition Monitoring of Railway Tracks
Undergraduate Thesis. Presented our work at IEEE IC4 2018. — Jan - May 2018

Time Series based Rainfall Prediction using Fuzzy Systems
Student proposed project in Fuzzy Systems — Oct - Nov 2017

Implementing real-time KLT face detection & tracking algorithm
Student proposed project in Computer Vision — Jan - May 2017

MOOC

Machine Learning (Coursera)
Deep Learning (Coursera)
Convex Optimization (edX)
Data Science and Machine Learning using Python (Udemy)
In Progress : Intel Edge AI for IoT Developers Nanodegree program (Udacity)

AWARDS & SCHOLARSHIPS

2019	-	Intel Edge AI Scholarship Program
2018	5^{th}/2400	Power of Connected Hackathon, Honeywell India
2017	354^{th} rank	Google Code Jam, Qualification Round
2014	4^{th}/140	NRC India and IIT-Bombay Robotics Tournament
2010	1^{st} Overall	RoboMech Challenge, Technophilia Systems
2007	75^{th} rank	International Mathematics Olympiad (IMO)

PUBLICATIONS

• **Suhas BN**, Bhagavat S, Vimalanand V, Suresh P. Wireless Sensor Networks Based Monitoring of Railway Tracks. In 2018 International CET Conference on Control, Communication, and Computing (IC4) 2018 Jul 5 (pp. 187-192). IEEE (DOI: 10.1109/CETIC4.2018.8531029)

• **Suhas BN**, Patel D, Nithin R, Belur Y, Reddy P, Nalini A, Yadav R, Gope D, Prasanta Ghosh. Comparison of Speech Tasks and Recording Devices for Voice Based Automatic Classification of Healthy Subjects and Patients with Amyotrophic Lateral Sclerosis. (pp. 4564–4568) INTERSPEECH 2019. (DOI:10.21437/Interspeech.2019-1285)

In Review : Submitted to ICASSP 2020

• Jhansi M, Aravind Illa, **Suhas BN**, Belur Y, Reddy P, Nalini A, Yadav R, Gope D, Prasanta Ghosh. Voice based classification of patients with Amyotropic Lateral Sclerosis, Parkinsons's Disease and Healthy Controls with CNN-LSTM using transfer learning

TALKS

Introduction to Music Information Retrieval, Audio licensing & Blockchains *Nov 2018*
Electrical Engineering Department, Indian Institute of Science

Performance characterization of Sound Recorders *Jul 2019*
Electrical Engineering Department, Indian Institute of Science

MIMO in 5G Wireless Systems *Dec 2019*
School of EECS, Penn State University

EXTRA CURRICULARS

• Playing Indian Percussions • Speedcubing • Quizzing • Chess • Yoga