SUHAS BN

10 Vairo Blvd, Apt 5C, State College, PA 16803
+1 814 862 8156 suhas@psu.edu LinkedIn:/in/suhasbn Personal Webpage

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

3M Health Information Systems, Pittsburgh/Remote (COVID-19) *May 2020 - Aug 2020*
Speech Recognition Research Intern *Core Speech R&D Team*

- Currently working on speaker separation for improving physician-patient conversations.

Penn State University, University Park *Jan 2020 - May 2020*
Instructional Assistant *College of Informational Sciences & Technology*

- • Assistant for DS 310 (Machine learning for Data Analytics) under Dr. Fenglong Ma.
- • Handling student clarifications, lab sessions, grading exams and overall functioning of the class

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 Parkinson's subjects from healthy controls. Paper presented at INTERSPEECH 2019, Austria.
- • 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, PyTorch, Numpy, SciPy, Matplotlib, spaCy OpenCV, CVXPY, Scikit-learn, Pandas, LaTeX, Arduino, Git, SoX, FFmpeg

COURSEWORK

Graduate Level

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

Undergraduate Level

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

AWARDS & SCHOLARSHIPS

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. (2018, July). Wireless Sensor Networks Based Monitoring of Railway Tracks. In 2018 International CET Conference on Control, Communication, and Computing (IC4) (pp. 187-192). IEEE. (DOI: 10.1109/CETIC4.2018.8531029)

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

• Mallela, J., Illa, A., **Suhas, BN**, Udupa, S., Belur,Y., Atchayaram, N., Yadav, R., Reddy, P., Gope, D., Ghosh, PK, "Voice based classification of patients with amyotropic lateral sclerosis, parkinson's disease and healthy controls with CNN-LSTM using transfer learning," In Proc. IEEE International Conference on In Acoustics, Speech and Signal Processing (ICASSP), May 2020, (pp. 6784-6788). (DOI:10.1109/ICASSP40776.2020.9053682)

• **Suhas, BN**, Mallela, J., Illa, A., Belur,Y., Atchayaram, N., Yadav, R., Reddy, P., Gope, D., Ghosh, PK, "Speech task based automatic classification of ALS and Parkinson's Disease and their severity using log Mel spectrograms" (Conference Copy)

LAB TALKS/PRESENTATIONS

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

CO-CURRICULAR/EXTRA CURRICULAR

• Executive Board Member, Engineering Graduate Student Council (EGSC), Penn State
• Engineering's Got Talent Chair, EGSC, Penn State
• Playing Indian Percussions • Speedcubing • Quizzing • Chess • Yoga

REFERENCES

Dr. Prasanta Ghosh, Indian Institute of Science, India
Dr. Fenglong Ma, Penn State, PA
Suresh Padmanabhan, Collins Aerospace, India
Narendra KC, Nitte Meenakshi Institute of Technology, India