Suhas Bettapalli Nagaraj

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Summary

- Seeking Product Manager / Associate Product Manager roles starting **Mid-2021**.
- Have worked in teams and on individual projects both in specialized and interdisciplinary domains. Enjoy being a part of cross-functional, high-impact projects!
  Experience in :

• Product requirement gathering,	• Mobile app development,	• Market & Competitor Research,
• Stakeholder management,	• Data science modelling,	• Product Roadmaps

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 *May 2020 - Aug 2020*
Speech Recognition Research Intern *Core Speech R&D Team*

- Implemented speaker separation methods for improving physician-patient conversations.
- Engineered methods for improving performance on reverberated audio samples.
- Presented key results to the 3M HIS Core Speech management group.

Penn State University, University Park *Spring and Fall 2020*
Instructional Assistant *College of Informational Sciences & Technology*

- Assistant for DS 310 (Machine learning for Data Analytics) under Dr. Fenglong Ma.

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

- Defined the **product vision**, interacted with the stakeholders (500+ patients, 30+ neurologists), **established a roadmap** for the project and responsible for the product implementation.
- End to end project ownership. Collected and analyzed speech signals of patients to classify ALS & Parkinson's subjects from healthy controls. Presented at INTERSPEECH 2019, Austria.
- Built an Android app that is currently being used by neurologists for real time detection of ALS & Parkinson's disease. Works with an accuracy of 99.9%.

PES University, Bangalore *Jun 2017 - May 2018*
Undergraduate Researcher *ECE Department*

- Led a team on identifying railway track fracture/cracks and help prevent train derailments in India.
- Presented a paper (see publications) on behalf of the team. Work mentioned on Financial Express

Skills

Languages	MATLAB, Python, C, C++, Bash, SQL
Software & Tools	Keras, Tensorflow, PyTorch, Numpy, SciPy, Matplotlib, spaCy, CVXPY OpenCV, Scikit-learn, Pandas, LaTeX, Arduino, Git, SoX, FFmpeg, Kaldi

Coursework

Graduate	Neural Networks, Graphs & Algorithms, Emerging Topics in Networking, Probability, Random Variables & Stochastic Processes, Convex Optimization, Wavelets & Sparse Signal Processing, Digital Image Processing II
Undergraduate	Linear Algebra, Digital Signal Processing, Computer Vision, Fuzzy Systems, Pattern Recognition & Classification, Research Methodology
Certification	**Lean Six Sigma Yellow Belt** - Council for Six Sigma Certification (CSSC)

Publications

1. **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)
2. **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)
3. 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)
4. **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

Other

Leadership
- **Executive Board Member**, Engineering Graduate Student Council (EGSC)
- **EGT Chair**, EGSC, Penn State (2020-21)
- **SEDTAPP Departmental Representative**, Penn State (2020-21)

Extra Curricular
- Playing Indian Percussions (Passed senior exams and have performed 100+ concerts)
- Speedcubing (Best solve of 11.2 sec on 3x3 and 2.4 sec on 2x2)
- Quizzing
- Chess (ELO Rating of 1550)
- Yoga

References

1. Dr. Prasanta Kumar Ghosh, Indian Institute of Science, India
2. Dr. Fenglong Ma, Penn State, PA
3. Dr. Mark C. Fuhs, 3M Health Information Systems, PA
4. Gp Capt. (Retd.) Suresh Padmanabhan, Collins Aerospace, India