Suhas Bettapalli Nagaraj

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Education

The Pennsylvania State University — University Park, PA
* ∗ **Ph.D. in Informatics** *(Applied ML & HCI for Healthcare)* **GPA 4.0/4.0** — 08/2021–05/2025 (exp.)
* ∗ **M.S. in Electrical Engineering** *(Communications & Signal Processing)* — 08/2019–05/2021

Fellowship & Honors

* * Selected for Google CS Research Mentorship Program (2022b Cohort). — 09/2022
* * Selected for Google Developers Machine Learning Bootcamp (2022) — 07/2022
* * Awarded the **NSF NRT LinDiv Fellowship** (2022-23). [Program Website] — 06/2022

Experience

* * Penn State University — University Park, PA
Graduate Teaching Assistant — 01/2020–05/2022
   1. Served as a Teaching Assistant for Data Visualization (Spring 22), Data Integration & Fusion (Fall 21), Data Analytics for Healthcare (Spring 21), Data Analytics for Machine Learning (Spring & Fall 20).
   2. Built and taught the lab curriculum. Graded assignments & provided comprehensive academic support and tutorials to undergraduate students in both one-on-one office hours and in-class setting.

* * 3M Health (M∗Modal) — Pittsburgh, PA
Speech Recognition R&D Intern — 06/2020–08/2020
   1. Implemented speaker-separation method for improving physician-patient conversations in reverberant environments.
   2. Extended ConvTasNet using phase difference information for far-field audio with Si-SDR of 11.96-12.69.

* * Indian Institute of Science — Bangalore, India
Research Assistant — 05/2018–08/2019
   1. Developed a novel automated method to detect neurological disorders from speech.
   2. Interviewed 300+ subjects with ALS & Parkinsons disease and recorded Speech (150+ hours), Video (10+ hours), and Electromagnetic articulography data. Extracted audio-visual features and performed classification experiments.
   3. Communicated with clinical staff, and research coordinators routinely regarding scheduling, and documentation.
   4. Led the product deployment of a smartphone app to supplement neurologists diagnosis at NIMHANS, Bangalore.

Publications

List of Publications on Google Scholar: https://scholar.google.com/citations?user=EOJDCfMAAAAJ

Select Projects

* * **UX Research** - (1) **Competitor Analysis** of Netflix [Slides], (2) **Heuristic Evaluation** of Target App [Slides], and (3) **User Testing** of BuzzFeed Website (Moderated & Unmoderated) [Slides]

* * **Applied Machine Learning** -
(1) **Federated Learning** to identify Depression, (2) **Interpretable online time-series analysis** to identify relapse of Bipolar, (3) **Multi-modal analysis** of Dementia (Text + Speech) - Won AAAI 2022 Dementia Hackallenge Competition, (4) **Currently:** Working on identifying behavioral changes in subjects exposed to IPV using smartwatches

Skills & Coursework

Bash, SQL, Python, MATLAB, Latex, Git, JIRA, SoX, FFmpeg, Keras, Tensorflow
PyTorch, PySyft, Pandas, NumPy, Scikit-learn, Matplotlib, spaCy, OpenCV, LIME
Coursework - Data Mining, Deep Learning, Computer Vision, Signal Processing, Wireless Networks, UX Evaluation, Human-Centered Design, Research Design, Data Privacy, Linguistics

Positions of Responsibility

President, Indian Graduate Student Association, Penn State (2022-23)