VISHAL SUNDER

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RESEARCH INTERESTS

End-to-End Spoken Language Understanding, Automatic Speech Recognition

EDUCATION

PhD in Computer Science *August 2019 - Present*
The Ohio State University *Overall CPI: 3.9/4.00*
Advisor: Dr. Eric Fosler-Lussier

Bachelor of Technology in Electrical Engineering *May 2016*
Indian Institute of Technology (BHU), Varanasi *Overall CPI: 8.35/10*

PROFESSIONAL EXPERIENCE

Graduate Research Associate *Present*
The Ohio State University
Speech and Language Technologies Lab

Research Intern *May 2022 - August 2022*
IBM Research, Yorktown Heights, USA
Speech Technologies group

Research Intern *May 2021 - August 2021*
IBM Research, Yorktown Heights, USA
Speech Technologies group

Research Engineer *July 2016 - July 2019*
TCS Research, New Delhi, India
Deep Learning and Artificial Intelligence group

PUBLICATIONS

V. Sunder, E. Fosler-Lussier, S. Thomas, HKJ. Kuo, B. Kingsbury. Tokenwise Contrastive Pretraining for Finer Speech-to-BERT Alignment in End-to-End Speech-to-Intent Systems. *INTERSPEECH-2022.* [Paper]

V. Sunder, S. Thomas, HKJ. Kuo, J. Ganhotra, B. Kingsbury, E. Fosler-Lussier. Towards End-to-End Integration of Dialog History for Improved Spoken Language Understanding. *ICASSP-2022.* [Paper]

P. Serai, **V. Sunder**, E. Fosler-Lussier. Hallucination of speech recognition errors with sequence to sequence learning. *IEEE/ACM Transactions on Audio, Speech and Language Processing.* [Paper]

V. Sunder, P. Serai, E. Fosler-Lussier. Building an ASR Error Robust Spoken Virtual Patient System in a Highly Class-Imbalanced Scenario Without Speech Data. *Preprint.* [Paper]

V. Sunder, E. Fosler-Lussier. Handling Class Imbalance in Low-Resource Dialogue Systems by Combining Few-Shot Classification and Interpolation. *ICASSP 2021.* [Paper] [Code]

V. Sunder, A. Srinivasan, L. Vig, G. Shroff, R. Rahul: One-shot information extraction from document images using neuro-deductive program synthesis. *NeSy workshop, IJCAI 2019.* [Paper]

G. Gupta,**V. Sunder**, R. Prasad, G. Shroff. CRESA: A Deep Learning Approach to Competing Risk Recurrent Event Survival Analysis. *PAKDD-2019*. [Paper]

V. Sunder, L. Vig, A. Chatterjee, G. Shroff. Prosocial or Selfish? Agents with different behaviors for Contract Negotiation using Reinforcement Learning. *ACAN workshop, IJCAI 2018*. [Paper]

V. Sunder, M. Yadav, L. Vig, G. Shroff. Information Bottleneck Inspired Method for Chat Text Segmentation. *IJCNLP 2017*. [Paper]

RELEVANT COURSES

Computer Science: Neural Networks, Advanced Artificial Intelligence, Data Mining, Advanced Algorithms, Speech and Language Processing, Foundations of Programming Languages, Computer Architecture.

Mathematics: Mathematics I (Calculus), Mathematics II (Linear Algebra), Numerical Methods, Optimization Techniques.