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## Research Interests

My research interests are mainly in the application of machine learning and statistics to speech and audio signal analysis. I am currently working on emotion morphing in speech which is a sub-domain of expressive speech synthesis.

## Education

**Johns Hopkins University, Baltimore** *(2017 - present)*
Ph.D. student, Department of Electrical and Computer Engineering
*Advisor:* Dr. Archana Venkataraman

**Indian Institute of Technology, Guwahati** *(2011 - 2015)*
Bachelors in Technology (BTech.) in Electronics and Electrical Engineering
*Advisors:* Dr. S.R.M Prasanna and Dr. S. Sundaram

## Publications

*Variational Cycle-GAN for Multi-speaker Emotion Conversion*
**Ravi Shankar**, Hsi-Wei Hsieh, Nicholas Charon, Archana Venkataraman
Under Review.

*A Deep-Bayesian Framework for Adaptive Speech Duration Modification*
**Ravi Shankar**, Archana Venkataraman
Under Review.

*Non-parallel Emotion Conversion using a Deep-Generative Hybrid Network and an Adversarial Pair Discriminator*
**Ravi Shankar**, Jacob Sager, Archana Venkataraman
Published in **Interspeech 2020**. ***Virtual**

*Multi-speaker Emotion Conversion via Latent Variable Regularization and A Chained Encoder-Decoder-Predictor Network*
**Ravi Shankar**, Hsi-Wei Hsieh, Nicolas Charon, Archana Venkataraman
Published in **Interspeech 2020**. ***Virtual**

*A Multi-Speaker Emotion Morphing Model Using Highway Networks and Maximum Likelihood Objective*
**Ravi Shankar**, Jacob Sager, Archana Venkataraman
Published in **Interspeech 2019**. **Oral**

*VESUS: A Crowd-Annotated Database to Study Emotion Production and Perception in Spoken English*
Jacob Sager, **Ravi Shankar**, Archana Venkataraman
Published in **Interspeech 2019**. **Oral**

*Weakly Supervised Syllable Segmentation by Vowel-Consonant Peak Classification*
**Ravi Shankar**, Archana Venkataraman
Published in **Interspeech 2019**. *Poster

*Automated Emotion Morphing in Speech Based on Diffeomorphic Curve Registration and Highway Networks*
**Ravi Shankar**, Hsi-Wei Hsieh, Nicolas Charon, Archana Venkataraman
Published in **Interspeech 2019**. *Poster

*Spoken Keyword Detection Using Joint DTW-CNN*
**Ravi Shankar**, Vikram C.M., S.R.M Prasanna
Published in **Interspeech 2018**. ****Oral**

*Spoken Term Detection using DTW and Morphological Operations*
**Ravi Shankar**, Arpit Jain, Deepak K.T., Vikram C.M., S.R.M Prasanna
Published in **NCC 2016**. ***Poster**

## Invited Talks

*Variational Cycle-GAN for Emotion Morphing*, **CIS Seminar, JHU**

## Work Experience

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|---|---|
| *iOS Developer*, **Housing.com**, Mumbai | *(June 2015 - Sep 2015)* |
| *Research Staff*, **University of Alberta**, Edmonton | *(Sep 2015 - Jan 2016)* |
| *Data Scientist*, **CaRPM**, Gurgaon | *(Jan 2016 - Aug 2016)* |
| *Research Staff*, **IDIAP Research Institute**, Martigny | *(Dec 2017 - June 2017)* |

## Honours and Awards

**NVIDIA Research Fellowship**, featured among the top 5% proposals.

**ISCA 2020 Travel Award** for Encoder-Decoder-Predictor model.

**MINDS Data Science Research Fellowship** (JHU) for 2019-20 and 2020-21.

**Institute Merit Scholarship** (IIT Guwahati) for 2012-13.

**DAAD-WISE Scholarship** (German Academic Exchange Program) for 2014.

**Merit-Cum-Means Scholarship** (IIT Guwahati) for 2012-13, 2013-14 and, 2014-15.

**Graduate Research Fellowship** (JHU) for 2017-18.

## References

Available on request.