RAVI SHANKAR, Ph.D. Student

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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

(2017 - present)

 $\operatorname{Ph.D.}$ 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

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

 ${\it Multi-speaker \ Emotion \ Conversion \ via \ Latent \ Variable \ Regularization \ and \ A \ Chained \ Encoder-Decoder-Predictor \ Network}$

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 iOS Developer, Housing.com, Mumbai (June 2015 - Sep 2015)

EXPERIENCE 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

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

Awards

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.