

Statement of Goals

Research Mission

Technology has played perhaps the most crucial role in the wonderful trajectory of humans becoming super alpha species on Earth. The overarching goal of my research career is to bring technology closer to and empower life. During my PhD, I have a much more focused mission: To bring *language technologies* closer to *human* life. My favourite technology is Artificial Intelligence(AI) and specifically, speech technology. I seek answers to the question 'What are the scientific challenges to be solved so that speech technologies can be seamlessly integrated into everyday life?'

Education

- 2018- Pursuing PhD in Language Technologies at Carnegie Mellon University.
- 2016-2018 Masters in Language Technologies at Carnegie Mellon University.
- 2014-2016 Masters (by Research) at International Institute of Information Technology, Hyderabad.
- 2008-2012 Bachelors in Technology at NRI Institute of Technology, Guntur, India.

Professional Summary

- Summer 2016 Research Intern at Microsoft Research, India.
- 2013-2014 Data Analyst at Google MapMaker, GlobalLogic, India.
- 2012-2013 Digital Representative(Customer Service) at Amazon India, Hyderabad.

Selected Publications

Conference Publications

- ICASSP 2021 Akshat Gupta, **SaiKrishna Rallabandi**, Xinjian Li and Alan W Black *Acoustics based Intent Recognition using Discovered Phonetic Units for Low Resource Language*
- Interspeech 2019 **SaiKrishna Rallabandi**, *On Controlled De-Entanglement for Natural Language Processing*, Doctoral Consortium.
- Interspeech 2019 **SaiKrishna Rallabandi** and Alan W Black, *Variational Attention using Articulatory Priors for generating Code Mixed Speech using Monolingual Corpora*.
- Interspeech 2019 Peter Wu, **SaiKrishna Rallabandi** and Alan W Black, *Ordinal Triplet Loss: Investigating Sleepiness Detection from Speech*.
- ICASSP 2019 Nidhi Vyas, **SaiKrishna Rallabandi**, Lalitesh Morishetty, Eduard Hovy and Alan W Black, *Learning Disentangled Representation in Latent Stochastic Models: A Case Study with Image Captioning*.
- Interspeech 2018 **SaiKrishna Rallabandi** Bhavya Karki, Carla Viega, Eric Nyberg and Alan W Black, *Investigating Utterance level Representations for detecting Intent from Acoustics*.
- Interspeech 2018 Pallavi Baljeker, **SaiKrishna Rallabandi** and Alan W Black, *An Investigation of Convolution Attention Based Models for Multilingual Speech Synthesis of Indian Languages*.
- Interspeech 2017 **SaiKrishna Rallabandi** and Alan W Black, *On building mixed lingual speech synthesis systems*.
- Interspeech 2017 Khyati Raghavi Chandu, **SaiKrishna Rallabandi**, Sunayana Sitaram and Alan W Black, *Speech Synthesis for Mixed-Language Navigation Instructions*.

- ASRU 2015 **SaiKrishna Rallabandi**, Sai Sirisha Rallabandi, Padmini Bandi and Suryakanth V Gangashetty, *Learning continuous representation of text for phone duration modeling in statistical parametric speech synthesis*.
- ICON 2014 Venkatesh Potluri, **SaiKrishna Rallabandi**, Priyanka Srivastava and Kishore Prahallad, *Significance of Paralinguistic Cues in the Synthesis of Mathematical Equations*, International Conference on Natural Language Processing.
- Survey Papers**
- axXic 2019 Sunayana Sitaram, Khyathi Raghavi Chandu, **Sai Krishna Rallabandi**, Alan W Black, *A Survey of Code-switched Speech and Language Processing*
- Workshop Publications**
- EACL 2021 Akshat Gupta, **SaiKrishna Rallabandi**, Alan W Black *Task-Specific Pre-Training and Cross Lingual Transfer for Sentiment Analysis in Dravidian Code-Switched Language*, EACL Workshop on Dravidian Languages.
- WSTCSMC 2020 Akshat Gupta, **SaiKrishna Rallabandi** and Alan W Black, *Mere account mein kitna balance hai? - On building voice enabled Banking Services for Multilingual Communities*
- WSTCSMC 2020 **SaiKrishna Rallabandi** and Alan W Black, *On detecting code mixing in speech using discrete latent representations*
- Blizzard 2019 **SaiKrishna Rallabandi**, Peter Wu and Alan W Black, *Submission from CMU for Blizzard Challenge 2019*, Blizzard Challenge Workshop.
- ACL 2018 **SaiKrishna Rallabandi**, Sunayana Sitaram and Alan W Black, *Automatic Detection of Code-switching Style from Acoustics*, Third Workshop on Computational Approaches to Linguistic Code-switching.
- Blizzard 2018 **SaiKrishna Rallabandi**, Pallavi Baljekar, Peter Wu, Evangelia Spiliopoulou and Alan W Black, *Submission from CMU for Blizzard Challenge 2018*, Blizzard Challenge Workshop.
- MCE 2018 **SaiKrishna Rallabandi** and Alan W Black, *Submission from CMU towards 1st MultiTarget Speaker Detection and Identification Challenge*.
- Blizzard 2017 **SaiKrishna Rallabandi**, Pallavi Baljekar and Alan W Black, *Submission from CMU for Blizzard Challenge 2017*, Blizzard Challenge Workshop.
- ASRU 2017 Pallavi Baljekar, **SaiKrishna Rallabandi** and Alan W Black, *Submission from CMU for Blizzard Machine Learning Challenge 2017*, Automatic Speech Recognition and Understanding.
- Blizzard 2016 Sai Sirisha Rallabandi, **SaiKrishna Rallabandi** and Suryakanth V Gangashetty, *IIIT-Hyd's submission to Blizzard Challenge 2016*, Blizzard Challenge Workshop.
- SSW 2016 Sunayana Sitaram, **SaiKrishna Rallabandi**, Shruti Rihwani and Alan W Black, *Experiments with cross-lingual systems for synthesis of code-mixed text*, Speech Synthesis Workshop.
- Blizzard 2015 **SaiKrishna Rallabandi**, Anandaswarup Vadapalli, Sivanand Achanta and Alan W Black, *Submission from IIIT-Hyd for Blizzard Challenge 2015*, Blizzard Challenge Workshop.
- Blizzard 2015 Kishore Prahallad, **SaiKrishna Rallabandi** and others, *Blizzard Challenge 2015*, Blizzard Challenge Workshop.

Software

- Falcon* A Unified Framework for Generative Models of Speech, <https://github.com/festvox/festvox/tree/master/src/falcon>.
- Judith* An assistant targeted at helping in large scale deep learning research, <https://www.cs.cmu.edu/~srallaba/ProjectAssistCore/>.

Misc

- GSoC 2015 Google Summer of Code with RedHen Labs
- ASRU 2015 Travel Grant

PhD Fellowship Facebook
2020

Summer School 2019 Attended summer school on Speech processing, University of Crete

PhD Forum Attended PhD Forum at Google London and helped summarized notes - t.ly/YGhH
Google

Teaching

- 11-777 Multimodal Machine Learning, Teaching Assistant, Fall 2019. Instructor: LP Morency
- 11-791 Software Engineering for Information Systems, Project Supervisor, Spring 2019. Instructor: Eric Nyberg
- 11-792 Design of Intelligent Systems, Project Supervisor, Spring 2018. Instructor: Eric Nyberg
- 11-492 Speech Processing, Teaching Assistant, Fall 2018. Instructor: Alan W Black
- 11-791 Software Engineering for Information Systems, Project Supervisor, Fall 2018. Instructor: Eric Nyberg