

Bajibabu Bollepalli

TTS-Researcher; ML-enthusiast

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My H-index: 6 (link)

Scientific Interests

Scientific Focus Sequence-to-Sequence mapping, specifically for Text-To-Speech (TTS); Generative models, such as GANs and WaveNet to model data distribution; Transfer learning to leverage large resources tasks for under resources tasks.

Keywords **Neural TTS, Transfer Learning, Deep Learning**

Work Experience

Jan 2018 – May 2018 **Industry Internship, Amazon.com, Gdansk, Poland.**

Supervisor: Dr. Thomas Drugman

Description: Worked for Alexa language technologies.

Jan 2014 – Jul 2014 **Academic Internship, National Institute of Informatics, Tokyo, Japan.**

Supervisor: Dr. Junichi Yamagishi

Description: Worked in the direction of conversational speech synthesis where we analyzed the acoustic differences between acted conversational and read speech.

Feb 2013 – Mar 2013 **Academic Internship, Aalto University, Espoo, Finland.**

Supervisor: Prof. Paavo Alku

Description: Worked for Smiple4all project, an European project, where we analyzed the effect of MPEG audio compression on HMM based speech synthesis using various state-of-the-art vocoders.

May 2012 – Jul 2012 **Industry Internship, Interactive Intelligence, Indianapolis, USA.**

Supervisor: Dr. Aravind Ganapathiraju

Description: Remotely worked from IIT Hyderabad on statistical parametric speech synthesis, where I generated a basic voice using their own speech corpus in English.

Education

2015– Present **Doctor of Technology, Aalto University, Espoo, Finland.**

Speaking style adaptation in neural network based TTS systems (tentative).

2012–2015 **Degree of Licentiate of Engineering, KTH Royal Institute of Technology, Stockholm, Sweden.**

Towards conversational speech synthesis - Experiments with data quality, prosody modification, and non-verbal signals

2011–2012 **Master of Science, IIT Hyderabad, India.**

Voice conversion using articulatory features (By research)

2007–2011 **Bachelor of Technology, IIT Hyderabad, India, CGPA: 8.0/10.**

Electronics and communication engineering (With honours)

Technical Skills

Speech Technology ○ Merlin, HTS, SPTK, and Festival/Festvox

Machine Learning ○ PyTorch, Tensorflow

○ Numpy, Scipy, Sklearn, Pandas, and Matplotlib

Programming ○ Python (expert), MATLAB (proficient), Bash (good), C (basic), R (basic)

Operating System ○ Ubuntu

Honors and Achievements

- 2016 **Best student paper award**, INTERSPEECH
- 2016 **Best student paper award**, ICASSP
- 2010 **Selected in Deans list**, IIT-Hyderabad
- 2009 **Selected in Deans list**, IIT-Hyderabad

Publications

See this link for the complete list of papers: [Google scholar search](#)

Selected publications

- **Bajibabu Bollepalli**, Lauri Juvela, Paavo Alku, *Speaking style adaptation in Text-To-Speech synthesis using Sequence-to-sequence models with attention*, arXiv preprint arXiv:1810.12051 (2018).
- Lauri Juvela, **Bajibabu Bollepalli**, Junichi Yamagishi, Paavo Alku, *Waveform generation for text-to-speech synthesis using pitch-synchronous multi-scale generative adversarial networks*, arXiv preprint arXiv:1810.12598 (2018).
- Manu Airaksinen, Lauri Juvela, **Bajibabu Bollepalli**, Junichi Yamagishi, Paavo Alku, *A Comparison Between STRAIGHT, Glottal, and Sinusoidal Vocoding in Statistical Parametric Speech Synthesis*, in Proc. of IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 26, no. 9, pp. 1658-1670, Sept., 2018.
- **Bajibabu Bollepalli**, Lauri Juvela, Paavo Alku, *Generative adversarial network-based glottal waveform model for statistical parametric speech synthesis*, in Proc. of Interspeech, Stockholm, Sweden, 2017.
- Manu Airaksinen, **Bajibabu Bollepalli**, Jouni Pohjalainen, Paavo Alku, *Glottal vocoding with frequency-warped time-weighted linear prediction*, in Proc. of IEEE Signal Processing Letters, vol. 24, no. 4, pp. 446-450, April 2017.
- **Bajibabu Bollepalli**, Manu Airaksinen, Paavo Alku, *Lombard speech synthesis using long short-term memory recurrent neural networks*, in Proc. of ICASSP, New Orleans, USA, 2017.
- Manu Airaksinen, **Bajibabu Bollepalli**, Lauri Juvela, Zhizheng Wu, Simon King, Paavo Alku, *GlottDNN - A full-band glottal vocoder for statistical parametric speech synthesis*, in Proc. of Interspeech, Sanfrancisco, USA, September, 2016. (*Received the best student paper award*)
- Lauri Juvela, **Bajibabu Bollepalli**, Manu Airaksinen, Paavo Alku, *High-pitched excitation generation for glottal vocoding in statistical parametric speech synthesis using a deep neural network*, in Proc. of ICASSP, Shanghai, China, March, 2016. (*Received the best student paper award*)
- **Bajibabu Bollepalli**, Alan W Black, Kishore Prahallad, *Modelling a noisy-channel for voice Conversion using articulatory features*, in Proc. of Interspeech, Oregon, Portland, USA, 2012.

Dissemination Activities

- 2014-2015 **Reviewer for**, *International Conference on Natural Language Processing (ICON)*.
- 2019 **Reviewer for**, *Computer Speech and Language Journal*.

Other Interests

- Sports (hiking, badminton)
- Reading (Nonfiction)
- Traveling

References

Available upon request