Sushanta K. Pani

sushanta.pani21@gmail.com | Phone: +1 (517) 505-2159

www.github.com/sushantakpani | www.linkedin.com/in/sushantakpani

EDUCATION

Michigan State University | East Lansing, MI   Graduated: May 2021
Master of Science, Computer Science
Thesis: "Coreference Resolution for Downstream NLP Tasks"

Centre for Development of Advanced Computing | Bengaluru, India   2010 - 2011
Diploma in Advanced Software Technology

Biju Patnaik University of Technology | Rourkela, India   2006 - 2010
B.Tech in Information Technology

EXPERIENCE

Michigan State University | East Lansing, MI   May 2019 - Present
NLP Researcher | HLR Lab
- Work on open source machine learning model to transcribe medical speech

Graduate Teaching Assistant | CSE Dept.
- Assisted instructors and guided students in computer science courses and Android mobile application projects

Centre for Development of Advanced Computing | Mumbai, India   May 2012 - December 2018
Project Engineer (I & II)
- Developed text-to-speech (TTS) synthesis and speech-to-text systems for English and 3 Indian languages
- Built Odia TTS systems and achieved MOS Score of 3.5/5.0, best among 13 teams of Indian federal government
- Gathered 40 hours of ML training speech dataset in 2 low resource languages (Marathi & Odia) and Indian English
- Achieved 90% reduction in manual labeling time by applying forced-Viterbi alignment to get phonetic transcription
- Trained statistical parametric TTS systems using HMM and DNN based generative sequence-to-sequence acoustic model
- Ported Indian languages TTS to android devices using CMU Flite
- Integrated our TTS system with assistive technology screen readers such as NVDA and ORCA
- Developed a multilingual SMS reader mobile application to utter messages in 7 languages using CDAC's TTS API

Keshima Technologies | Bengaluru, India   August 2011 - May 2012
Associate Software Engineer
- Worked on a home medical alert system that detects fall using the accelerometer in personal mobile devices

OPEN SOURCE CONTRIBUTION
- Extended the **CMU's Festvox** suite and Flite open-source code to support Indian languages TTS engine. This work is being used by the Hear2Read project for the visually impaired

SKILLS
- Programming Languages: Python, C, Scheme, Shell, Perl, C++, Java, MATLAB
- Deep Learning Framework: PyTorch, TensorFlow
- Speech Technology Tools: Tacotron, Merlin, Kaldi, Festvox, Flite, Festival, HTK, HTS, Praat, Wavesurfer
- Phonetic Notation: IPA, SAMPA, ILSL
- Foreign Languages: Sanskrit, Odia, Hindi, Marathi

PUBLICATIONS
- Padmaja Joshi, **Sushant Pani**, et al. "Understanding the Challenges in Mobile Computation Offloading to Cloud through Experimentation", MOBILESoft-2015
- Hema Murthy, **Sushanta K Pani**, et al. "Seamless Integration of Common Framework Indian Language TTSes in various applications", OCOCOSDA-2013