Megha Parhi

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Objective

A full-time position related to Signal Processing and Machine Learning.

Education

The University of Texas, Austin, TX — Dec. 2019
M.S. Electrical Engineering
Advisor: Prof. Ahmed Tewfik
Thesis: Classifying Imaginary Vowels from Frontal Lobe EEG via Deep Learning

University of Minnesota, Minneapolis, MN — May 2015
Bachelor of Electrical Engineering

Computer Skills

MATLAB, Python 2/3 (tensorflow), LaTeX, Microsoft Office

Teaching

Graduate Teaching Assistant — Spring 2017
University of Texas – Department of Electrical & Computer Engineering
TA for EE 313: Linear Systems and Signals. Responsibilities included holding weekly office hours, grading homework and exams, teaching lecture when professor is absent, and writing solutions to homework.

Work Experience

Minnetronix Inc., St. Paul, MN — August 2015 – June 2016
QA Test Engineer

- Assisted with the development and verification testing for a Level 3 medical device: Ventricular Assistant Device (VAD) controller.
- Developed and tested a protocol to test viscosity of blood using a VAD controller.
- Assisted with the development and verification for the Enterprise Resource Planning system for the company.

Selected Publications

[0] **Megha Parhi** and Ahmed H. Tewfik. "Classifying Imaginary Vowels from Frontal Lobe EEG via Deep Learning". In: *(to be submitted)*. 2020.

[1] Yin Liu, **Megha Parhi**, Marc D. Riedel, and Keshab K. Parhi. "Synthesis of correlated bit streams for stochastic computing". In: *50th Asilomar Conference on Signals, Systems and Computers, ACSSC 2016, Pacific Grove, CA, USA, November 6-9, 2016*. IEEE, 2016, pp. 167–174.

[2] **Megha Parhi**, Marc D. Riedel, and Keshab K. Parhi. "Effect of bit-level correlation in stochastic computing". In: *2015 IEEE International Conference on Digital Signal Processing, DSP 2015, Singapore, July 21-24, 2015*. IEEE, 2015, pp. 463–467.

Projects

Classifying Imaginary Vowels, — August 2019 – December 2019
For my MS thesis, I showed that by using the data from the frontal region of the brain (where speech occurs) that accuracy is greater than 90 percent compared to past work. Past work had accuracy around 80 percent using all the brain regions data. These experiments were modeled with CNN and LSTM architectures using tensorflow.

Honors and Awards

North America School of Information Theory (NASIT) Travel Grant — May 2018
Undergraduate Research Opportunities Program (UROP) Award — Spring 2015
Carl E. and Ethel A. Swanson Scholarship — 2014 – 2015