Megha Parhi

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

EDUCATION

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

University of Minnesota, Minneapolis, MN   May 2015
B.S. Electrical Engineering

SELECTED COURSEWORK

Data Mining, Bayesian Methods for Machine Learning, Probability and Stochastic Processes I, Digital Video, Genomic Signal Processing and Data Science, Estimation Theory, Machine Learning (coursera), Data Analysis, Digital Signal Processing,

SKILLS

C/C++, Python 2/3 (i.e., tensorflow, numpy,...), MATLAB, R, PyTorch, LaTeX

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.

TEACHING

Graduate Teaching Assistant   Spring 2017
University of Texas – Department of Electrical & Computer Engineering
TA for EE 313: Linear Systems and Signals

SELECTED PUBLICATIONS

[1]   **Megha Parhi** and Ahmed H. Tewfik. "Classifying Imaginary Vowels from Frontal Lobe EEG via Deep Learning". In: *28th European Signal Processing Conference, EUSIPCO 2020, Amsterdam, The Netherlands.* 2020.

SELECTED PROJECTS

Classifying Imaginary Vowels,   August 2019 – December 2019
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 that has an accuracy of 80 percent. These experiments were modeled with CNN and LSTM architectures using tensorflow.

Camera-aided tracking,   June 2017 – December 2018
I collected and analyzed GPS and camera data for the analysis of the position of a vehicle based on a camera and DSRC sensor using computer vision tracking algorithms and machine learning for mmWave beam alignment.

Survey on Copy Number Variations,   October 2016 – December 2016
I surveyed literature on Copy Number Variations (CNVs) in genome sections. This project took a closer look at the Genome Alteration Detection algorithm (GADA) and I also compared several Single Nucleotide Polymorphisms (SNP) array based algorithms.

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