

# Megha Parhi

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|-----------------------|--|------------------------------|
| OBJECTIVE             | A full-time position related to Machine Learning and Signal Processing.  |                              |
| PERSONAL              | U.S. Citizen   |                              |
| EDUCATION             | <b>The University of Texas</b> , Austin, TX  | Dec. 2019                    |
|                       | <i>M.S. Electrical Engineering</i><br>Advisor: Prof. Ahmed H. Tewfik<br>Thesis: Classifying Imaginary Vowels from Frontal Lobe EEG via Deep Learning   |                              |
|                       | <b>University of Minnesota</b> , Minneapolis, MN   | May 2015                     |
|                       | <i>B.S. Electrical Engineering</i>   |                              |
| 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, L <sup>A</sup> T <sub>E</sub> X  |                              |
| WORK EXPERIENCE       | <b>Minnetronix Inc.</b> , St. Paul, MN   | August 2015 – June 2016      |
|                       | <i>QA Test Engineer</i> <ul style="list-style-type: none"><li>· Assisted with the development and verification testing for a Level 3 medical device: Ventricular Assistant Device (VAD) controller.</li><li>· Assisted with the development and verification for the Enterprise Resource Planning system for the entire company.</li></ul> |                              |
| TEACHING              | <b>Graduate Teaching Assistant</b>   | Spring 2017                  |
|                       | University of Texas – Department of Electrical & Computer Engineering<br>TA for EE 313: Linear Systems and Signals   |                              |
| SELECTED PUBLICATIONS | [1] <b>Megha Parhi</b> and Ahmed H. Tewfik. “Classifying Imaginary Vowels from Frontal Lobe EEG via Deep Learning”. In: <i>28th European Signal Processing Conference, EUSIPCO 2020, Amsterdam, The Netherlands</i> . 2020.  |                              |
| SELECTED PROJECTS     | <b>Classifying Imaginary Vowels,</b>   | 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.   |                              |
|                       | <b>Camera-aided tracking,</b>  | 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.   |                              |
|                       | <b>Survey on Copy Number Variations,</b>   | 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.   |                              |
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| 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                  |