Akhila Devabhaktuni

10 Howard Dr, Robbinsville, NJ 08691
(757)-693-1846 - akhiladevi95@gmail.com

EDUCATION

University of Buffalo, SUNY, Buffalo, NY 08/18-12/19
Major : Data Science

Birla Institute of Technology and Sciences, Goa, India 08/13-06/18
Major : Electronics and Instrumentation.

Birla Institute of Technology and Sciences, Goa, India 08/13-06/18
Major : Chemistry

RELEVANT EXPERIENCE

Dr. Zhe Chen and Dr. Dayu Lin at New York University (New York) 08/2019-Present
Research Assistant
Project : "Unsupervised Deep Neural Networks for video frame prediction and identity tracking"
In Dr. Z. Chen's lab, under joined supervision of Dr. Dayu Lin, I've worked on employing Deep Neural Networks for Unsupervised video processing in predicting movement and track identity of mice. My algorithm aims to track identity of mice, locate moving body parts without human interference. First part is locating the mice using a moving window and trained Variational auto encoder for feature extraction. Second part of the algorithm is a Bi-directional Long Short-term memory generative network for making future predictions. Not only does the algorithm predict posture and position of mice, it can also track identity of mice at all times. Applications of this algorithm is extensive from online video processing for posture detection to tracking and activity prediction. I aim to submit my thesis work for review. We aim to submit our work to Cold Spring Harbor's *From Neuroscience to Artificially Intelligent Systems.*

Techniques : Variational Auto Encoders, Bi-Long Short Term Memory Networks, Generative Adversarial Network, Identity tracking

Dr. Zhe Chen Lab at New York University (New York) 06/2019-09/2019
Research Assistant
Project : "CNN for IED Spike detection from Multiple Channel"
In Dr. Zhe Chen's lab, I've worked with a Postdoctoral Candidate in employing supervised Deep Neural Networks for spike detection. We've trained a Convolution Neural Network on multi-channel spike data to localize and detect epileptic seizures. We've observed, by providing enough annotated data, varying loss function and hyper-parameters, false positive rate can be significantly reduced.

Techniques : Convolution neural networks, False positive detection, Low amplitude IED signals

Dr. Rachel H. Blair at SUNY Buffalo (Buffalo, New York). 01/2018 - 05/2019

Student Researcher

Project : “Effects of Pollution on Smoking and Non-Smoking individuals”

For this project, I worked alongside Dr.Rachel Blair in studying the effect of pollution on biochemical data of smoking and non-smoking, male and female individuals. We opted *Principal Component Analysis* for feature extraction to localize and predict the influence of pollution on cohort of individuals.

Techniques : Principal Component Analysis, Hierarchical Cluster Analysis, Partial Least Squares Regression, Semi-supervised clustering.

Dr. Vitaliy Kurlin at University of Liverpool 01/2016 - 05/2016

Remote Student Assistantship

Project : “High dimensional data transfer without loss on informaiton”

I worked under supervision of Dr.Vitaliy Kurlin on writing an R package to execute Singular vector decomposition on high dimensional matrices.Since high dimensional data transfer after SVD compression face runtime complexity, I’ve worked on cost effective model to be deployed in R.

Techniques : Singular Value Decomposition, R, MATLAB.

GRANTS, HONORS AND AFFILIATIONS

BITS Pilani Merit Scholarship	2014-2017
Reliance Infratel Scholar	08/16-05/17
Birla MCN Scholarship	2013-2014
Birla Peer Mentor Program Dept Head.	2016-2017
Birla Summer Internship Program Assistant	2016