Saeb Ragani

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Linkedin Github Portfolio

Objective

Seeking Internship in Data Science & Machine Learning for the Summer of 2021.

Skills

RESEARCH
Machine Learning, Deep Learning, Data Mining, Statistical Analysis, Statistical Process Control, Signal Processing, Time Series Analysis

LANGUAGES
Python, R, Matlab, Fortran

OS
Linux, Windows

OTHERS
HTML/CSS, JavaScript, Java, MySQL

Education

2016 - PRESENT
PHD, MECHANICAL ENG.
SUNY at Buffalo
Buffalo, NY

2012 - 2014
MSC, MECHANICAL ENG.
Eastern Mediterranean University
Magusa, Turkey

2005 - 2010
BSC, MECHANICAL ENG.
K.N. Toosi University of Tech.
Tehran, Iran

Teaching Experience

DYNAMICS SYSTEMS LAB
2 Semesters at UB ***Buffalo, NY***

THERMODYNAMICS
4 Semesters at UB ***Buffalo, NY***

Experience

2018-NOW **University at Buffalo** **Research Assistant at Bio-Mechanics Lab**

Project1: Gait Analysis
We developed 2 statistical process control frameworks to detect fatigue from the IMU signals on the ankle. I implemented the algorithms in R.
R, R-Markdown, doParallel

Project2: Activity Recognition
In a project that was funded by GE we tried to predict the activities of electric line workers from the signals collected by wearable sensors. I implemented multiple ML algorithms using the Sklearn and TensorFlow libraries in python.
Python, Scikit-learn, TensorFlow, Jupyter Notebook

Project3: Task Frequency
Using signals from wearable sensors I implemented multiple time series motif discovery methods along with similarity search approaches to count the repetitions in certain tasks.
Python, Jupyter Notebook

2016-2018 **UB Neurosurgery** **Research Assistant at CTRC**

Project1: Simulation of Intracranial aneurysm Treatment
We simulated implantation of endovascular stent and coil as well as the post-treatment blood flow using CFD techniques. We also validated the simulations using particle image velocimetry.
StarCCM, Tecplot, Matlab

2014-2016 **Med-X Research Institute, Shanghai** **CFD Engineer**

Project1: Effect of Different Imaging Techniques on CFD Simulations
We looked into the effect of 2 coronary imaging techniques (CCTA and ICA) on calculation of fractional flow reserve using computational fluid dynamics techniques.
Fortran, ANSYS Fluent, Tecplot

Other Projects

FALL 2019 **CSE 601** **Clustering & Classification**
I implemented 5 clustering & 4 classification algorithms in python without the use of existing libraries. *Python*

SPRING 2020 **CSE 574** **Fairness in ML**
We optimized the post-processing evaluation methods to improve the fairness in 3 ML models. *Python*

Selected Publications (Google Scholar)

ACTIVITY RECOGNITION IN ELECTRIC LINE WORKERS FROM SINGLE WRIST-WORN ACCELEROMETER
IISE Journal (under review)

A PERSONALIZED AND NON-PARAMETRIC FRAMEWORK FOR DETECTING CHANGES IN GAIT CYCLES
Scientific Reports Journal (under review)