

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, Bio-Mechanics

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)