National University of Computer and Emerging Sciences



Lab Manual 13

CL461-Artificial Intelligence Lab

|  |  |
| --- | --- |
| Course Instructor | Dr. Mubasher Baig |
| Lab Instructor (s) | Usman Anwer  Mahmood Hussain |
| Section | B |
| Semester | Spring 2021 |

Department of Computer Science

FAST-NU, Lahore, Pakistan

## Exercise (20)

## Features Selection for Regression Problem (10 marks)

Feature selection is one the most important aspects of Data Engineering. Genetics Algorithms can be useful while attempting Feature Engineering. TPOT library is used to select the features. [Demo](https://www.analyticsvidhya.com/blog/2017/07/introduction-to-genetic-algorithm/) to TPOT library is given. Your job to apply feature selection problems on this sales forecasting data. (Data Files are attached)

## Features Selection for Classification Problem (10 marks)

[Titanic](https://www.kaggle.com/c/titanic) problem is famous in machine learning. It's a classification task that focuses on finding the survival rate. Your job is to apply a Genetic Algorithm to select appropriate features.

# Submission Instructions

Always read the submission instructions carefully.

* Rename your Jupyter notebook to your roll number and download the notebook as **.ipynb** extension.
* To download the required file, go to **File->Download .ipynb**
* Only submit the **.ipynb** file. DO NOT **zip** or **rar** your submission file
* Submit this file on Google Classroom under the relevant assignment.
* Late submissions will not be accepted