**Cairo University**

**Faculty of Computers and Artificial Intelligence**

**Information Technology Department**

**Third Year (2022-2023)**

**Pattern Recognition**

<span style="color:red">**Research Project (10 marks)**</span>

Select one of the following problems with an associated dataset

<span style="color:red">**Examples**</span>

**1. heart diseses predection**

**https://www.kaggle.com/competitions/FCIS-BIO-1/data**

**2. Diabetes prediction dataset**

**https://www.kaggle.com/datasets/iammustafatz/diabetes-prediction-dataset'**

**3. Mobile Price Classification**

**https://www.kaggle.com/datasets/iabhishekofficial/mobile-price-classification**

**4. Cancer Data**

**https://www.kaggle.com/datasets/erdemtaha/cancer-data**

**5.Heart Attack Analysis & Prediction Dataset**

**https://www.kaggle.com/datasets/rashikrahmanpritom/heart-attack-analysis-prediction-dataset**

**6.COVID-19 Dataset**

**https://www.kaggle.com/datasets/meirnizri/covid19-dataset**

**7. Customer Clustering**

https://www.kaggle.com/datasets/dev0914sharma/customer-clustering

**8. Iris Flower Dataset**

https://www.kaggle.com/datasets/arshid/iris-flower-dataset

**9.Abalone Dataset**

https://www.kaggle.com/datasets/rodolfomendes/abalone-dataset

**10.Covid_w/wo_Customer  Chest Xray**

https://www.kaggle.com/rashikrahmanpritom/covid-wwo-pneumonia-chest-xray

**Requirements:**

- o Build a complete pattern recognition system to solve the selected problem.
- o Coding of your work [will be discussed in the lab: week starting from 20/5/2023 (7 marks)]
- o A report that describes your methodology for solving the problem, and the detailed result of your implementation (3 marks)

**Notes:**

- o Each group consists of 5-6 students.
- o You can implement any feature extraction or classifier (whether you study in the course or not)
- o Deep learning-based systems are not allowed.
- o Groups with the same project will be discussed by the same TA (So be sure to have a different methodology in your implementation)
- o You will submit your report before the coding discussion (the day will be announced later)

Good Luck all