# Criminology

**You can download the initial file for this question from this link.**

In large cities like Los Angeles, understanding and predicting criminal activities is vital for improving public safety and optimizing resource allocation. In these areas, law enforcement agencies collect a large volume of data related to criminal incidents. This data typically includes information such as the date, time, and location of the incident, victim demographics, the type of weapon used, and the case status. By analyzing this data, patterns and trends in criminal behavior can be identified. The goal of this problem is to develop a machine learning model that can predict the type of crime based on various incident details.

## Evaluation Criteria

To evaluate your model, the F1 Score metric is used, and the averaging model is macro.To score in this question, your model must have a minimum F1 Score of 0.25, and in this case, the final score will be calculated based on the following formula:

$$round(f1score,3)\times 250$$

If your model does not meet the threshold, the score received will be **zero**.

▼ **Attention**

During the competition, the score you see is only the result of your model's evaluation on 30% of the test data. After the competition time ends, your **final score** will be calculated on the remaining 70%.

This is done to prevent overfitting and to maintain the generality of the model, to ensure that models that have overfitted will drop in the final scoring.

## How to Submit Your Answer

To answer this question, first open the notebook file located in the initial file and then follow the steps as requested. Finally, after running the answer-generating cell (the last cell of the notebook file), submit the created result.zip file.

▼ **Important Warning**

Please note that before running the answer-generating cell, you must have saved the changes made in the notebook using the ctrl+s shortcut, otherwise, at the end of the competition, your **score** will be changed to **zero**.

Also, if you are using Colab to run this notebook file, before submitting the result.zip file, download the latest version of your notebook and place it inside the submitted file.