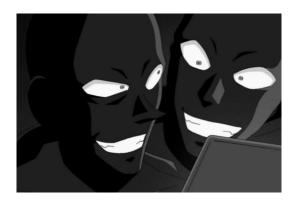


# **Gender Classification**

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#### **Problem**

Sometimes the police have the witness description of the criminal but they do not know whether he/she is a male or female so they cannot reduce the search area.

#### **Solution**

In this project, we will develop a classification model to predict the gender of the criminal according to the description we got from the witness. Which will help the police to search for the criminal.

#### **Dataset**

The dataset we will use contains the witness description, The data are taken from the <u>Gender</u> <u>Classification Dataset</u> from Kaggle The following table explains the dataset in detail:

Column	Data type
long_hair	Integer (0 or 1), indicates whether this
	person has long hair or not.
forehead_width	Integer, the width of the forehead from
	right to left given in cm.
forehead_height	Integer, the width of the forehead width in
	cm
nose_wide	Integer (0 or 1), whether the nose is wide
	or not
nose_long	Integer (0 or 1), whether the nose is long
	or not
lips_thin	Integer (0 or 1), whether this person has a
	thin lip or not
distance_nose_to_lip_long	Integer (0 or 1), is the distance from nose
	to lip is long
gender	String, either Male or Female

#### **Features**

We will use five models to find the best model Logistic Regression Model, which is the best for binary classification, Decision Tree, Support Vector, Random Forest Classifier, KNN.

### **Tools**

To grab the data and build the model we will use the following tools:

Tool	Description
Jupyter notebook	Contains cells of Python code and human-readable text
pandas	The library is written in Python for data manipulation and analysis
sklearn	Software machine learning library for the Python programming language
Matplotlib	Matplotlib is a plotting library for Python

## **Conclusion**

We expect the model will predict the gender of the criminal after receiving the description from the witness. The model will help the police to reduce the search area.