BITI2513: INTRODUCTION TO DATA SCIENCE

ASSIGNMENT 1

PREDICTION OF RECIDIVISM

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1.0 Aims of AI

The goal of recidivism prediction using AI is to assist in reducing the number of inmates who reoffend after being released from custody by identifying those who are more likely to do so and offering them specialized rehabilitation programmes and support services. It is intended that by doing this, the rates of recidivism can be decreased, enhancing public safety, lightening the load on the criminal justice system, and facilitating the effective reintegration of more persons who have served time in prison.

2.0 How to Deploy Our Prediction

1. Drop the unnecessary column data.
2. Check the null data from the dataset.
3. Create histogram graphs for data analysis using the seaborn.
4. Replace the data with the null data.
5. Convert it into numeric data.
6. Recidivism Prediction using Support Vector Machine (SVM).
7. Accuracy (0.67).

3.0 Dataset

Kaggle: 3 Year Recidivism for Offenders Released from Prison in Iowa

Link:

https://www.kaggle.com/slonnadube/recidivism-for-offenders-released-from-prison/activity?select=3-Year_Recidivism_for_Offenders_Released_from_Prison_in_Iowa_elaborated.csv

This data set is on re-offending in a 3-year period after an initial release from prison, among offenders serving a prison term in the State of Iowa, US between 2010 and 2015, with recidivism follow-up between 2013 and 2018.

The variables in the dataset include:

- Fiscal Year Released
- Recidivism Reporting Year
- Race – Ethnicity
- Age at Release
- Convicting Offense Classification
- Convicting Offense Type
- Convicting Offense Subtype
- Main Supervising District
- Release Type
- Part of Target Population

4.0 Tools and Programming Language

Google Colaboratory and Python