



Chicago Arrest Predictor

A Tool for Police Dispatchers

Harika Peddiraju - Ulises Domínguez

Yuting Chien - Karla Flores



PROJECT DESCRIPTION

- Data Source:



Crimes - 2001 to Present Public Safety

- City of Chicago Data Portal - Police Department
- <https://data.cityofchicago.org/Public-Safety/Crimes-2001-to-Present/ijzp-q8t2>

- Our proposal could be used to potentially predict the **probability of getting arrested** when a crime is committed under given conditions (type of crime, location, hour, etc.)
- This information seeks to be relevant for **Police Dispatchers** as a tool for deploying resources in a crime.

CHICAGO CRIME

City Context

From 2001 to 2021

- Total Amount of Crime: 6,691,918
- Total Amount of Arrest: 1,783,949

27%

MODELS



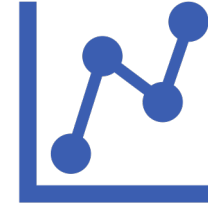
Logistic Regression

Training Score: 86.55%
Testing Score: 86.57%
F1 Weighted Average: 84%
Result: Fitting



Random Forest
Classifier

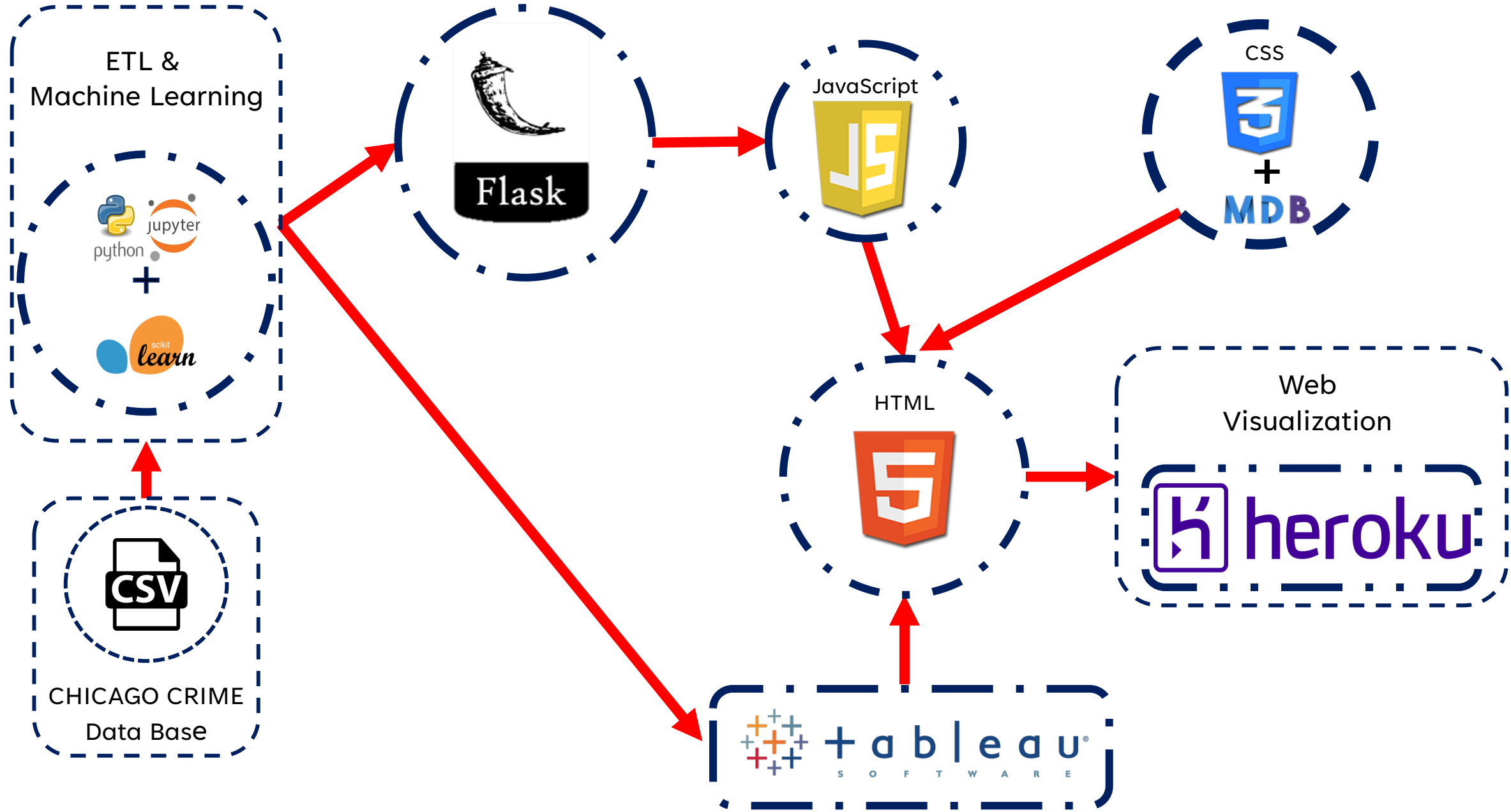
Training Score: 84.12%
Testing Score: 84.13%
F1 Weighted Average: 82%
Result: Fitting



Neural Network

Loss: 34.76%
Accuracy: 86.86%
Recall: 59.97%
Result: Overfitting

CODE CRAFTING



Thank you.

