

Defendant: Iliana
 Race: African-American
 Age: 18-29
 Charge degree: Misdemeanor
 Number of prior convictions: None
 Has juvenile priors: Yes

Test Case

Prediction: **likely to reoffend**

Input-Influence

The predictive model assesses an individual's profile information in the database to predict whether or not this individual is likely to reoffend. How different information influence the prediction is illustrated below. The more + marks means a person with that attribute is more likely to re-offend. Similarly, more - marks means a person with that attribute is less likely to reoffend. Attributes with (0) have little impact. A * will appear next to features which are relevant for this individual.

Processed Data Classifier

- Race:
 - Caucasian (0)
 - * African-American (0)
- Age:
 - * 18-29 (+++++)
 - 30-39 (++)
 - 40-49 (0)
 - 50-59 (0)
 - >59 (--)
- Charge degree:
 - Felony (0)
 - * Misdemeanor (0)
- Number of prior convictions:
 - * None (-----)
 - 1-3 (---)
 - 4-6 (0)
 - 7-10 (+++++)
 - >10 (+++++)
- Has juvenile priors:
 - No (0)
 - * Yes (+++)

Raw Data Classifier

- Race:
 - Caucasian (0)
 - * African-American (+)
- Age:
 - * 18-29 (++++)
 - 30-39 (+)
 - 40-49 (0)
 - 50-59 (-)
 - >59 (---)
- Charge degree:
 - Felony (0)
 - * Misdemeanor (-)
- Number of prior convictions:
 - * None (-----)
 - 1-3 (---)
 - 4-6 (0)
 - 7-10 (+++)
 - >10 (++++)
- Has juvenile priors:
 - No (0)
 - * Yes (++)

Demographic

The predictive model assesses an individual's profile information in the database to predict whether or not this individual is likely to reoffend. The prediction is based on the likelihood of previous cases with different profile information re-offended or not, as illustrated below. A * will appear next to features which are relevant for this individual.

Raw Data Classifier

- Race:
 - 40% of those in the Caucasian race group reoffended
 - * **55% of those in the African-American race group reoffended**
- Age:
 - * **58% of those in the 18-29 age group reoffended**
 - 49% of those in the 30-39 age group reoffended
 - 40% of those in the 40-49 age group reoffended
 - 35% of those in the 50-59 age group reoffended
 - 26% of those in the >59 age group reoffended
- Charge degree:
 - 53% of those in the Felony charge degree group reoffended
 - * **43% of those in the Misdemeanor charge degree group reoffended**
- Number of prior convictions:
 - * **31% of those in the None prior convictions group reoffended**
 - 47% of those in the 1-3 prior convictions group reoffended
 - 61% of those in the 4-6 prior convictions group reoffended
 - 75% of those in the 7-10 prior convictions group reoffended
 - 78% of those in the >10 prior convictions group reoffended
- Has juvenile priors:
 - 45% of those in the has no juvenile priors group reoffended
 - * **74% of those in the has juvenile priors group reoffended**

Case

The predictive model assesses an individual's profile information in the database to predict whether or not this individual is likely to reoffend. The prediction is based on whether people similar or identical to this individual re-offended or not in the past.

Proc The training set contained **10** individuals identical to Iliana. **6** of them reoffended (**60%**)

Raw The training set contained **5** individuals identical to Iliana. **3** of them reoffended (**60%**)

Sensitivity

The predictive model assesses an individual's profile information in the database to predict whether or not this individual is likely to reoffend. This prediction was based on:

Proc. Classifier

- Iliana's age is **18-29**.
If it had been **30-39 (or older)**, they would have been predicted as NOT likely to reoffend.
- Iliana **has** juvenile priors.
If it had been **No**, they would have been predicted as NOT likely to reoffend.

Changing other attributes will not change the prediction for Iliana.

Raw Classifier

- Iliana's race is **African-American**.
If it had been **Caucasian**, they would have been predicted as NOT likely to reoffend.
- Iliana's age is **18-29**.
If it had been **30-39 (or older)**, they would have been predicted as NOT likely to reoffend.
- Iliana **has** juvenile priors.
If it had been **No**, they would have been predicted as NOT likely to reoffend.

Changing other attributes will not change the prediction for Iliana.

Processed Data Classifier

- Race:
 - 49% of those in the Caucasian race group reoffended
 - * **49% of those in the African-American race group reoffended**
- Age:
 - * **59% of those in the 18-29 age group reoffended**
 - 47% of those in the 30-39 age group reoffended
 - 39% of those in the 40-49 age group reoffended
 - 34% of those in the 50-59 age group reoffended
 - 23% of those in the >59 age group reoffended
- Charge degree:
 - 52% of those in the Felony charge degree group reoffended
 - * **44% of those in the Misdemeanor charge degree group reoffended**
- Number of prior convictions:
 - * **32% of those in the None prior convictions group reoffended**
 - 46% of those in the 1-3 prior convictions group reoffended
 - 61% of those in the 4-6 prior convictions group reoffended
 - 79% of those in the 7-10 prior convictions group reoffended
 - 77% of those in the >10 prior convictions group reoffended
- Has juvenile priors:
 - 45% of those in the has no juvenile priors group reoffended
 - * **74% of those in the has juvenile priors group reoffended**