

Supplementary Materials"

December 21, 2021

Performance and Feature Importance Report

An overview of this report

This report presents the performance and feature importance of prediction models of four outcomes:

- Past month heroin use
- Remission (long, medium, and short term)
- Overdose
- Mortality

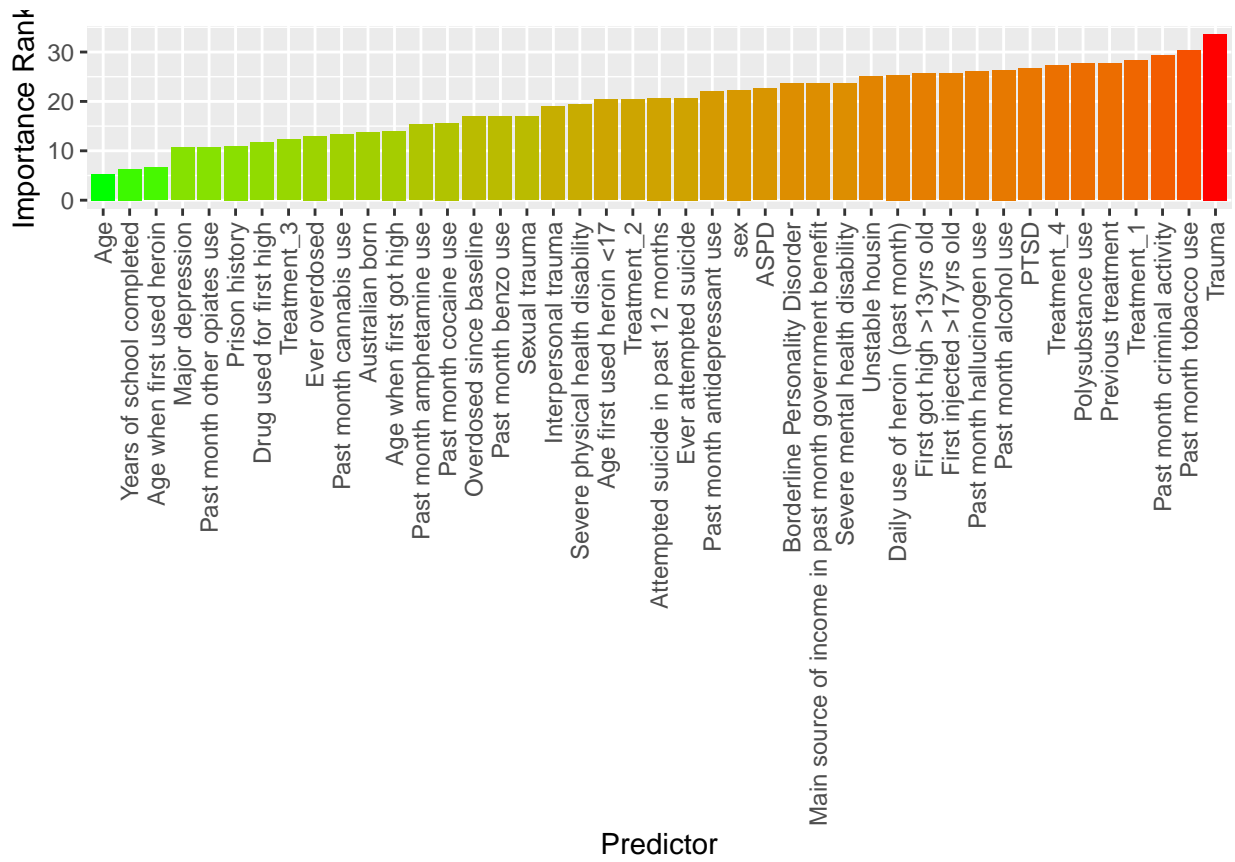
Past month heroin use

HU_1YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.7343750
sens	binary	0.8548387
spec	binary	0.6212121
f_meas	binary	0.7571429

Feature Importance

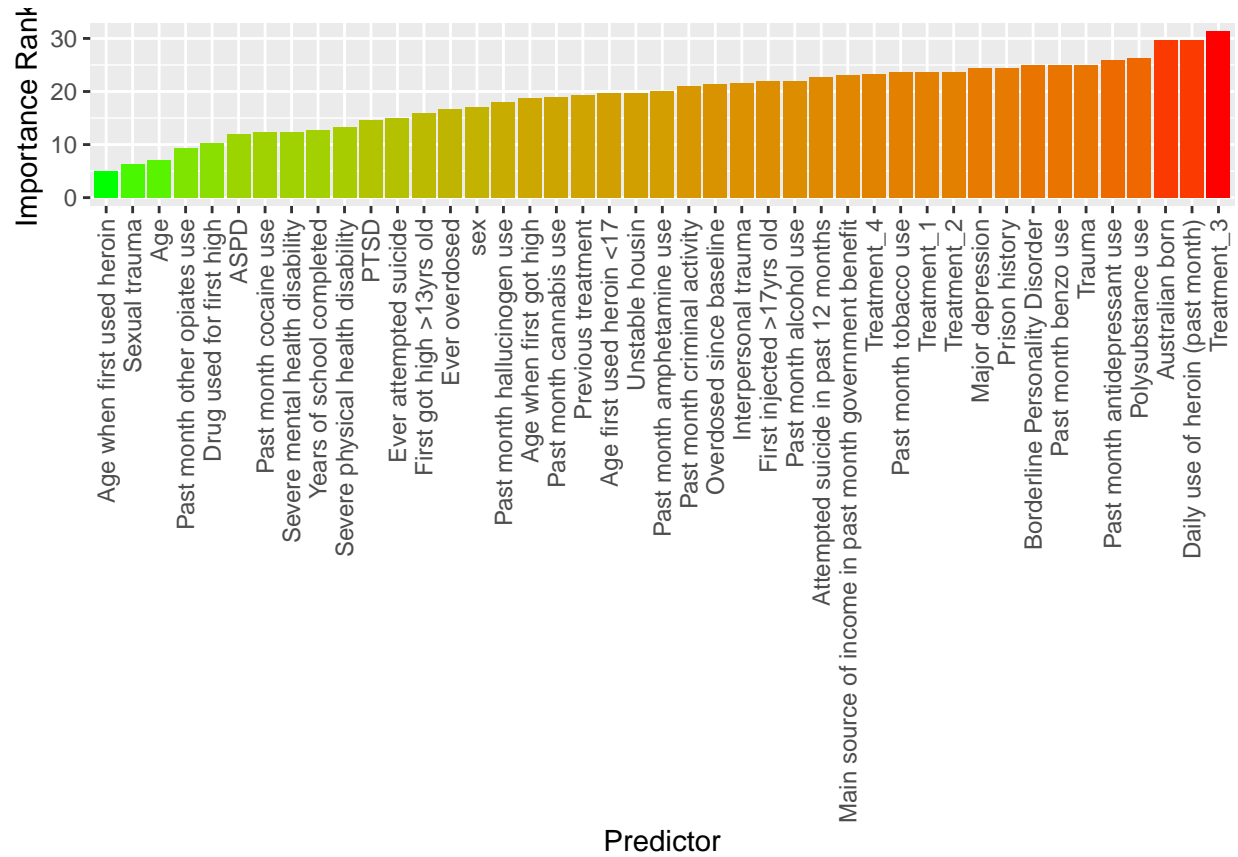


HU_5YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8264463
sens	binary	0.8333333
spec	binary	0.8187135
f_meas	binary	0.8355091

Feature Importance

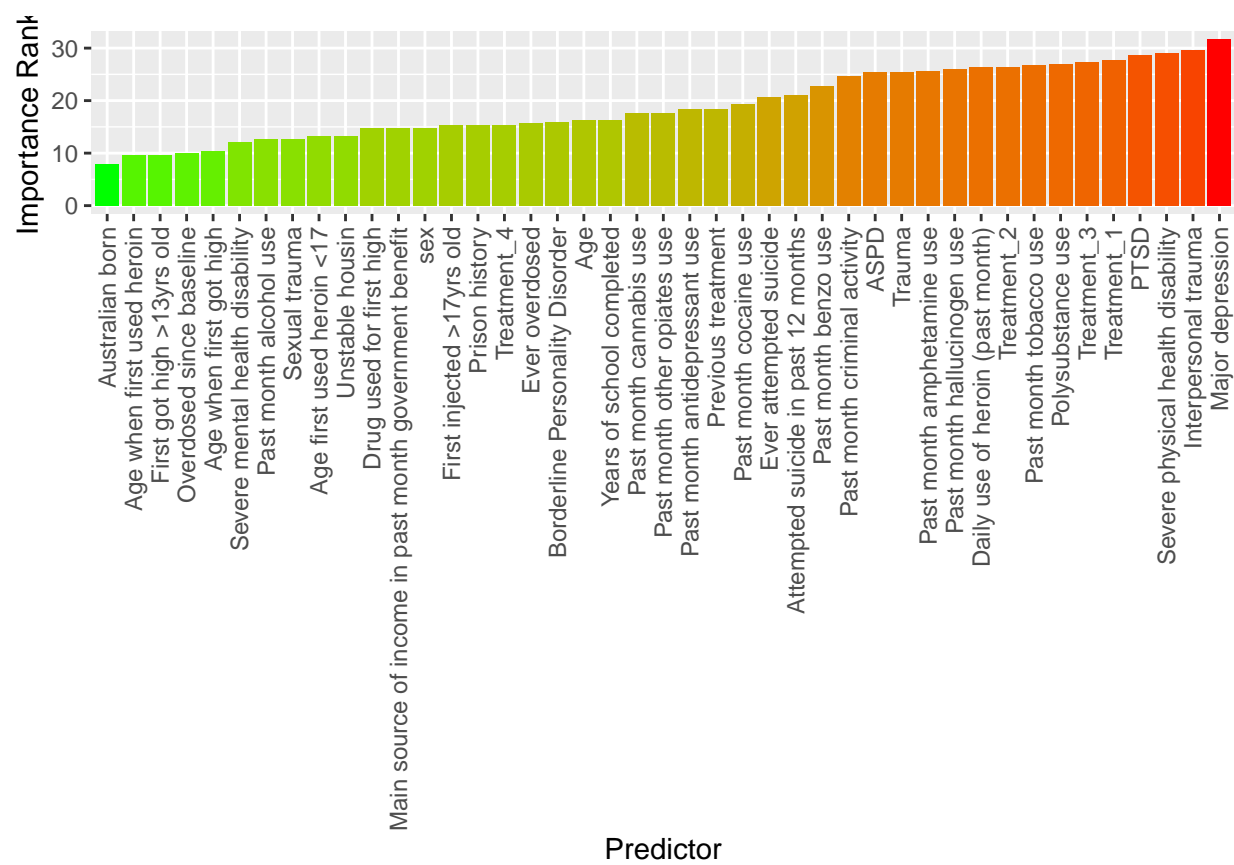


HU_10YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8489583
sens	binary	0.9408602
spec	binary	0.7626263
f_meas	binary	0.8578431

Feature Importance



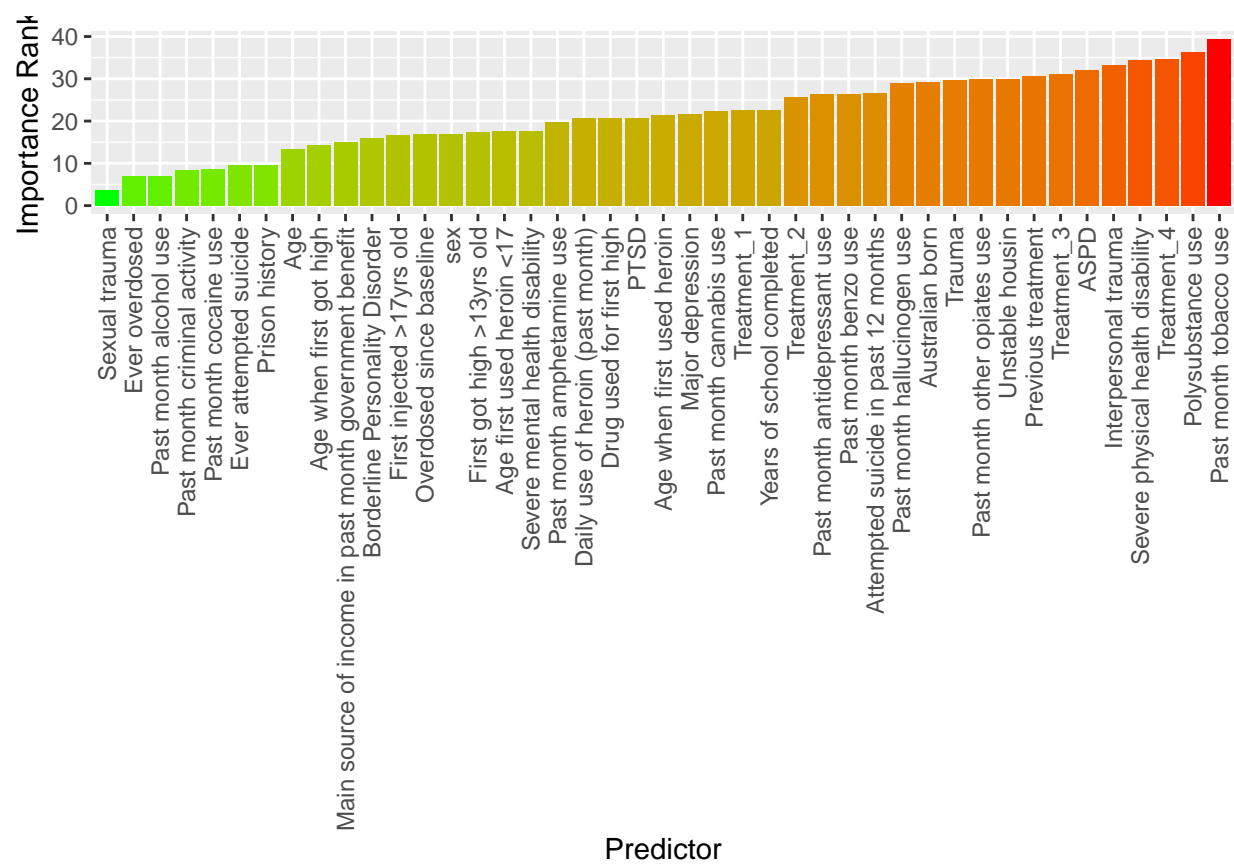
Remission

STA_1YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8695652
sens	binary	0.8952381
spec	binary	0.8431373
f_meas	binary	0.8744186

Feature Importance

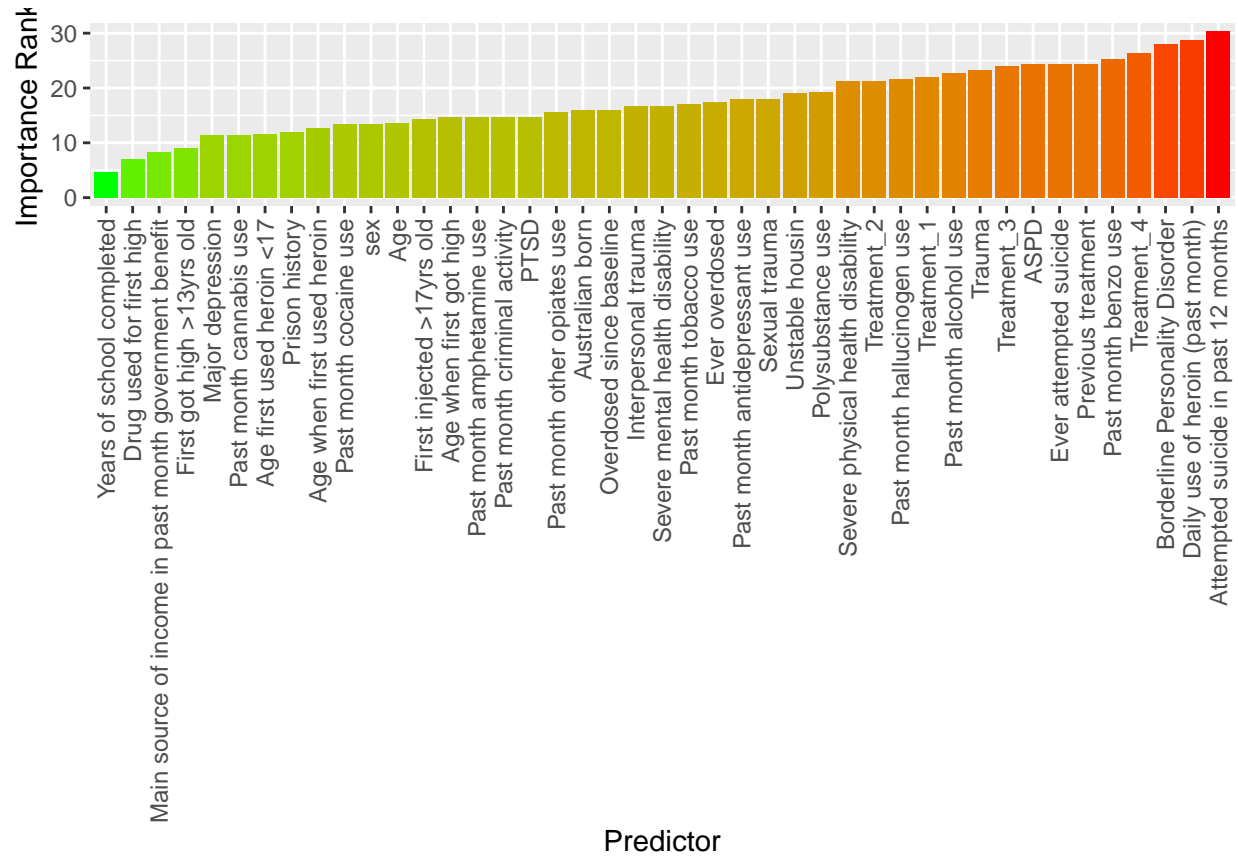


STA_5YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.9055556
sens	binary	0.9007092
spec	binary	0.9108527
f_meas	binary	0.9087657

Feature Importance

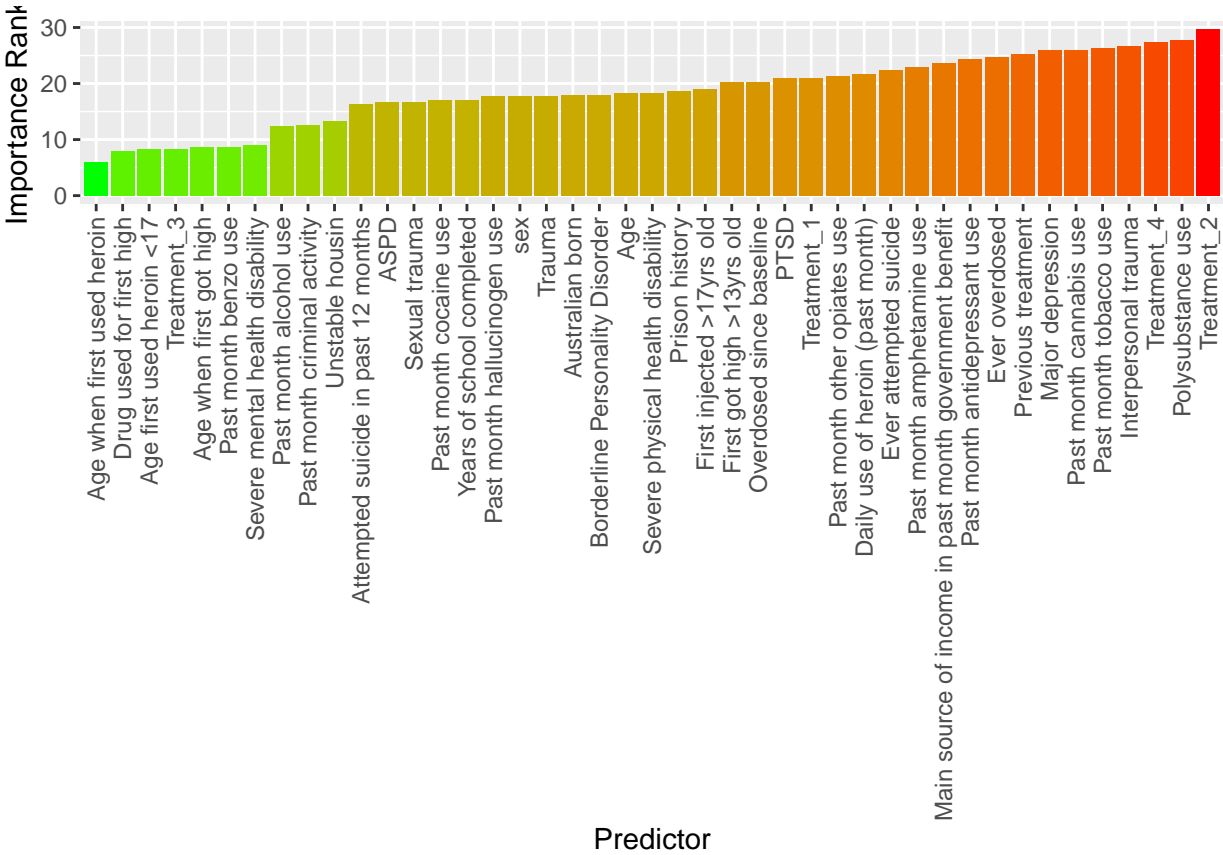


MTA_5YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.7530864
sens	binary	0.8275862
spec	binary	0.6666667
f_meas	binary	0.7826087

Feature Importance

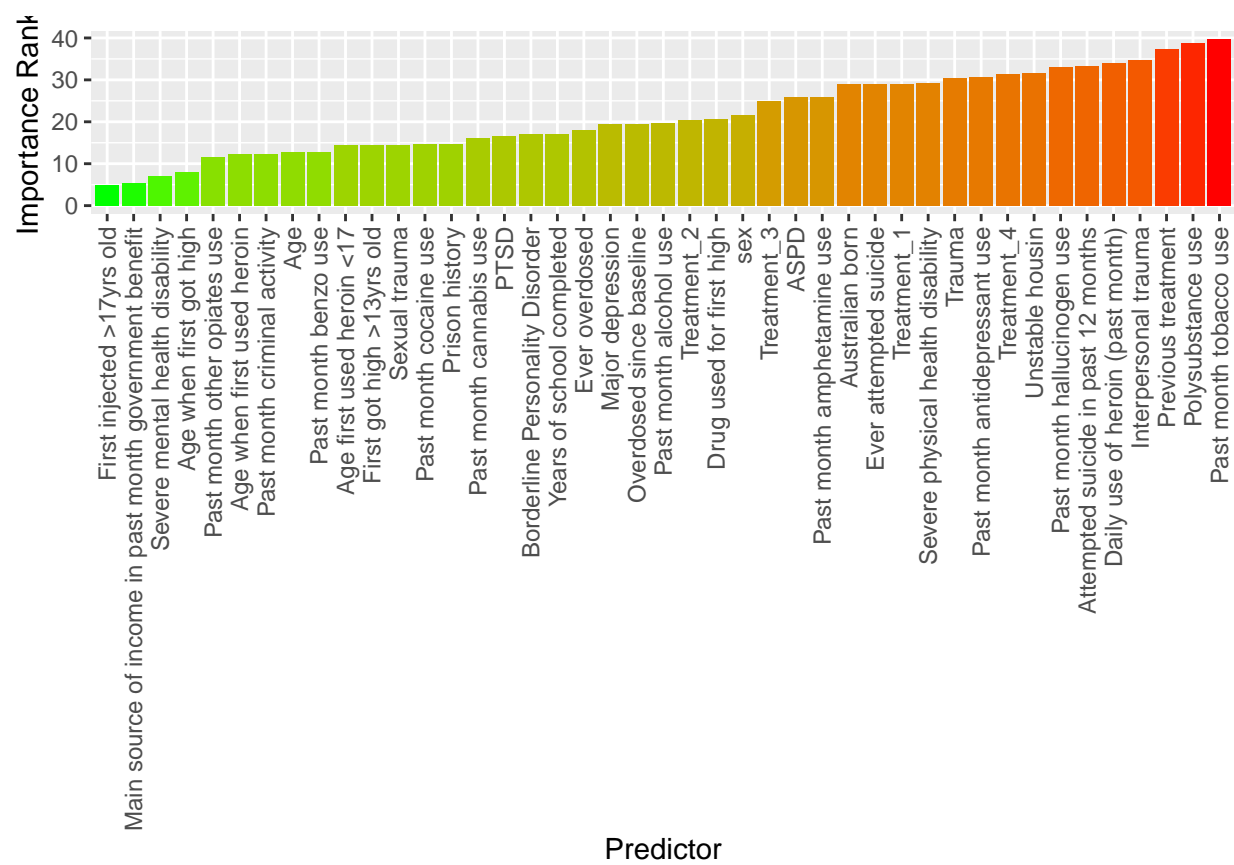


STA_10YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8827839
sens	binary	0.9473684
spec	binary	0.8122605
f_meas	binary	0.8940397

Feature Importance

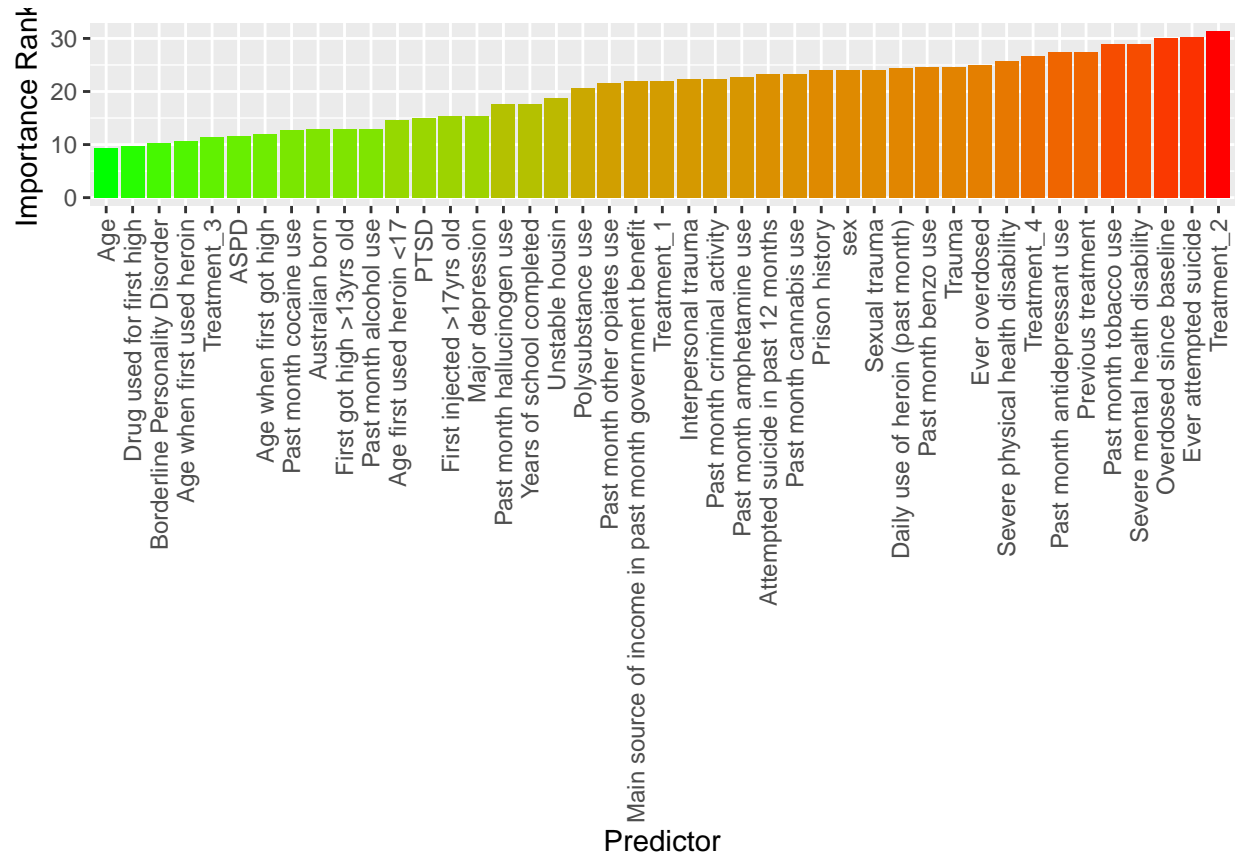


MTA_10YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8209877
sens	binary	0.9806202
spec	binary	0.6403509
f_meas	binary	0.8532884

Feature Importance

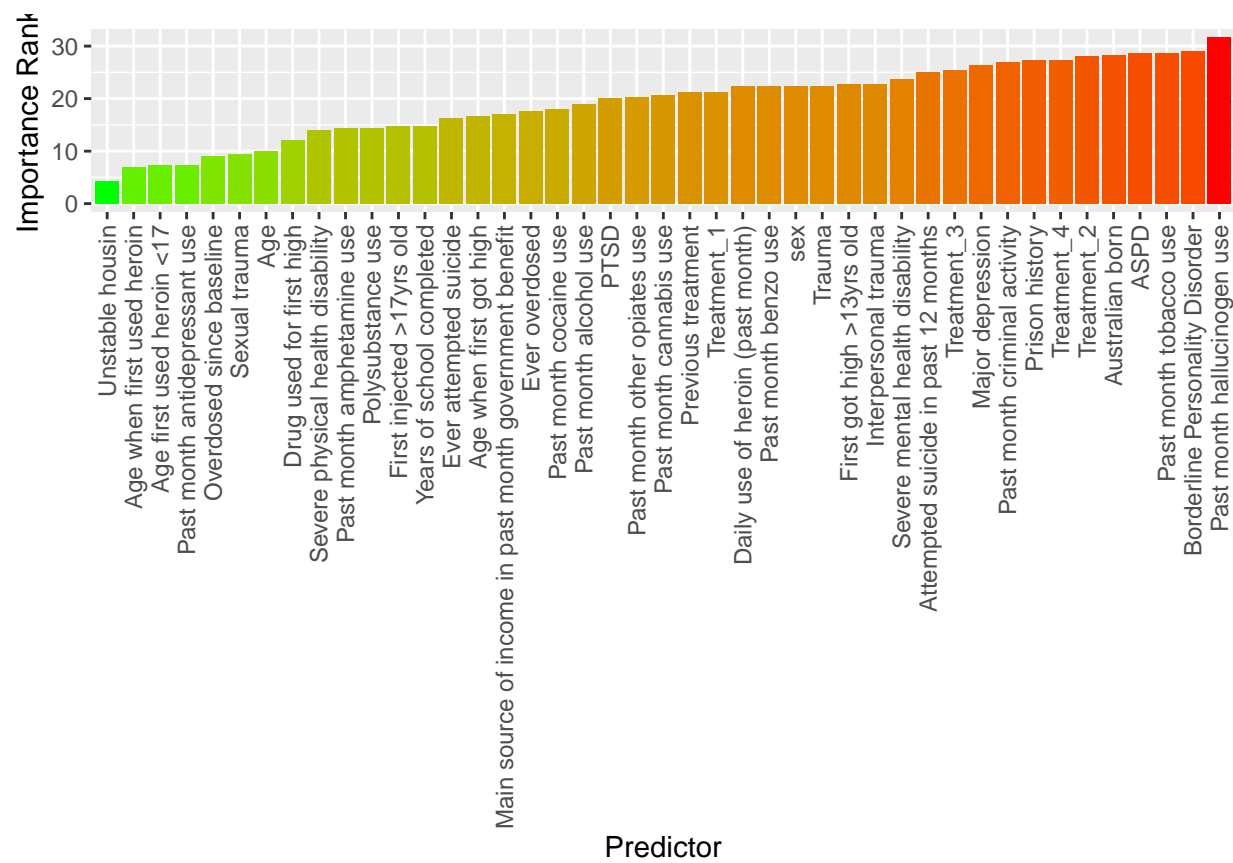


LTA_10yr

Performance

.metric	.estimator	.estimate
accuracy	binary	0.7493540
sens	binary	0.7795699
spec	binary	0.7213930
f_meas	binary	0.7493540

Feature Importance



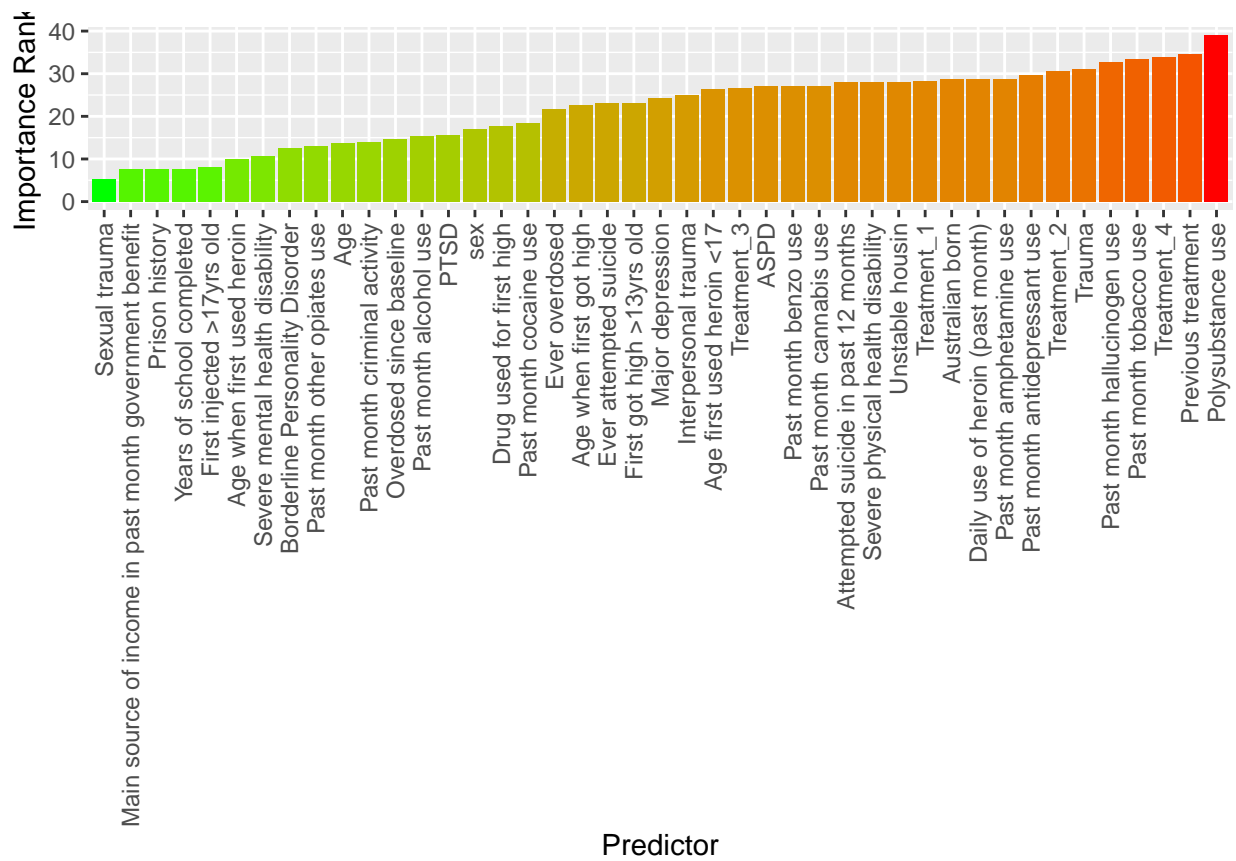
OD

OD_1YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.9125683
sens	binary	0.8736842
spec	binary	0.9545455
f_meas	binary	0.9120879

Feature Importance

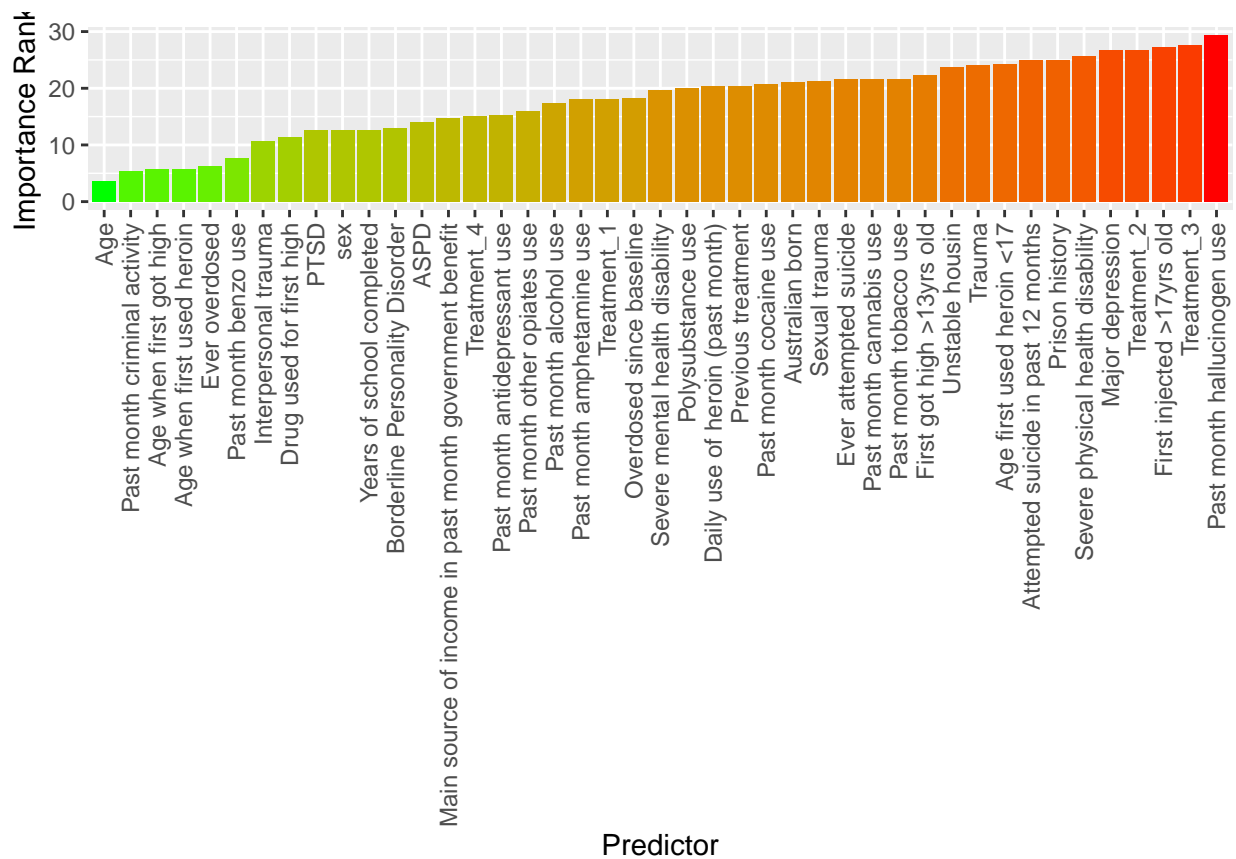


OD_5YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8633094
sens	binary	0.8497653
spec	binary	0.8774510
f_meas	binary	0.8639618

Feature Importance

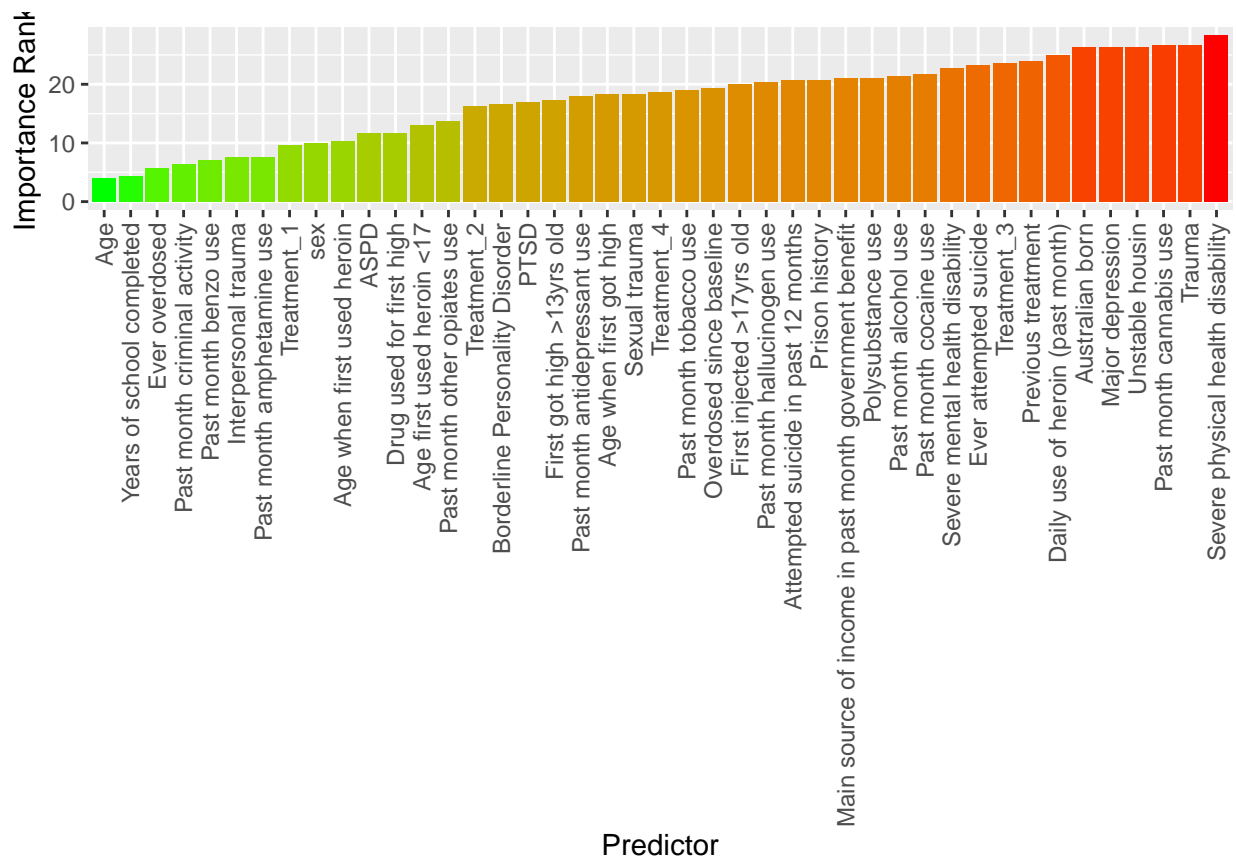


OD_10YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.7619048
sens	binary	0.7777778
spec	binary	0.7460317
f_meas	binary	0.7656250

Feature Importance



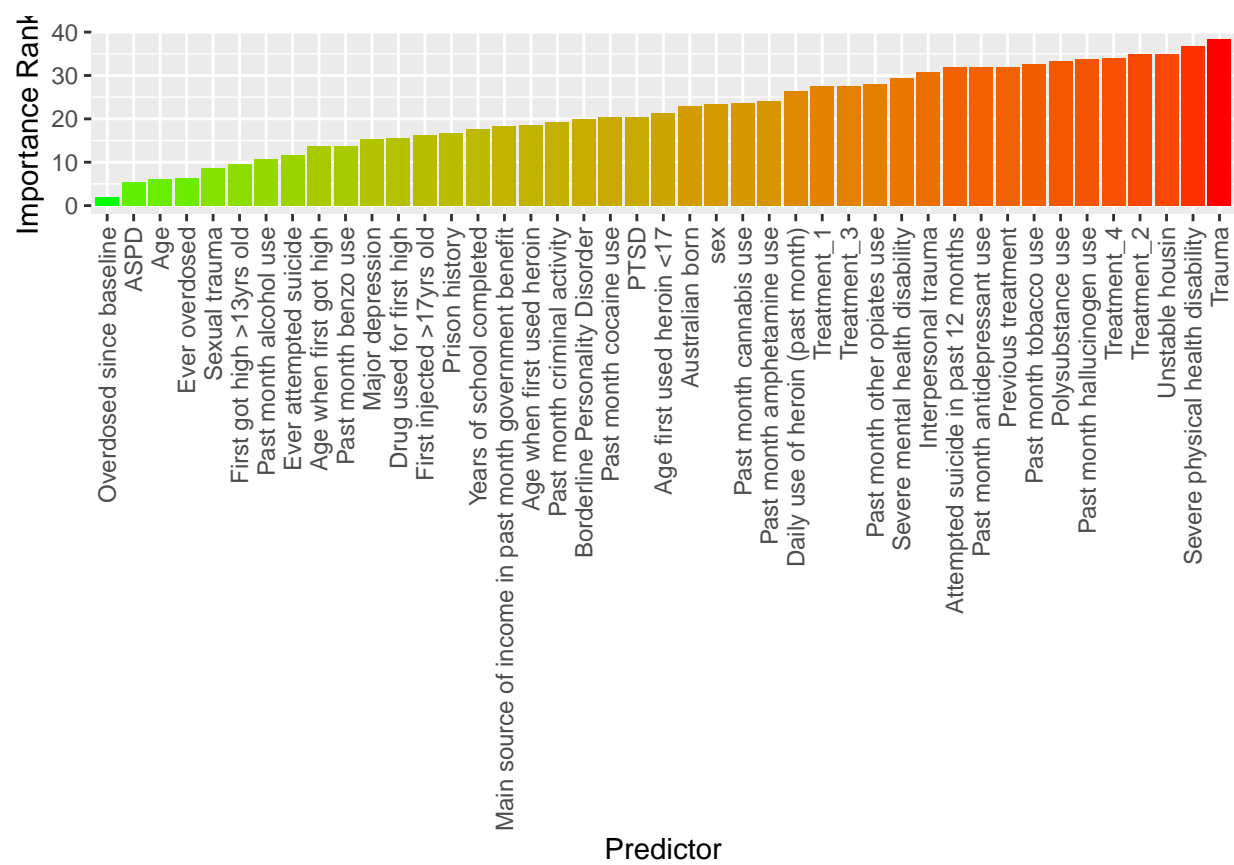
Mortality

DEATH_10YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8493827
sens	binary	0.8733850
spec	binary	0.8274232
f_meas	binary	0.8471178

Feature Importance



DEATH_15YR

Performance

.metric	.estimator	.estimate
accuracy	binary	0.8920765
sens	binary	0.8888889
spec	binary	0.8950131
f_meas	binary	0.8876245

Feature Importance

