

Glossary

VARIABLE_NAME	VARIABLE_DESCRIPTION
Age First	The date of the start of the offender's first episode less the offender date of birth
CriGroup	The Offence Code of the most serious offence that occurred in the last Episode. The seriousness of the offence is held in the Offence Seriousness table
First Offence	First offence is indicated if there is only a single episode for the offender
Gender	Set to extract gender from conviction history or IOMS. Gender = "M", "F".
LgCrLrg	Ln(time free between latest episodes in years)
LgExSer4	Ln(ExpSer40 + (1.0/40.0)) LgExpSer40 is the sum of the seriousness (S) of each episode multiplied by 0.4 to the power of an ascending index, from last episode to the first episode. The offence seriousness is obtained from the offence seriousness table.
LgExSer8	Ln(ExpSer80 + (1.0/40.0)) LgExpSer80 is the sum of the seriousness of each episode multiplied by 0.8 to the power of an ascending index, from last episode to the first episode. The offence seriousness is obtained from the offence seriousness table.
LgNoConv	Ln(NoConv)
LgTimeFree	Log(TimeFree) If DOB not defined or the offender is younger than 13 then LgTimeFree is set to -1
MnSer	The mean seriousness of offences. (PsTotSer / NoConv)
NoConv	The sum of the No of Counts fields from the LES history records.
No Prisen	The number of episodes that resulted in a prison sentence.
Num_Episodes	The number of separate episodes.
RtEpi	Num_Episodes / TimeFree. This is the rate of offending.
TimeFree	Time after 13th birthday the offender has been free. ((Age less sum(episode lengths))/365.25 > 13) or 1/365.25, whichever is greater)

Algorithm for calculating reconviction/risk of imprisonment

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round(1/(1+exp(-1*(-2.8469
+0.3438*(case when CriGroup = '04' then 1 else 0 end)
+2.6224*(case when Gender = "MALE" then 1 else 0 end)
+0.000509*MnSer
+0.552*LgNoConv
+0.5766*(case when No Prisen > 0 then 1 else 0 end)
+0.0898*RtEpi
-0.1861*(case when First Offence = 'N' then 1 else 0 end)
-0.3388*LgCrLrg
-0.8304*LgTimeFree*(case when Gender = "MALE" then 1 else 0 end)
+0.0457*LgExSer4))),0.0000001) as roi_post

, round(1/(1+exp(-1*(2.0566
+0.7878*RtEpi*(case when (Gender = "FEMALE") then 1 else 0 end)
-0.3081*LgCrLrg*(case when Gender = "FEMALE" then 1 else 0 end)
+0.6482*log(Num_Episodes)*(case when Gender = "FEMALE" then 1 else 0 end)
-0.9245*LgTimeFree*(case when (Gender = "FEMALE" and First Offence = 'Y') then 1
else 0 end)
-0.6482*LgTimeFree*(case when (Gender = "FEMALE" and First Offence = 'N') then 1
else 0 end)
+0.0317*LgExSer8*(case when (Gender = "FEMALE" and First Offence = 'N') then 1
else 0 end)
+0.0907*LgExSer8*(case when (Gender = "FEMALE" and First Offence = 'Y') then 1
else 0 end)
+3.7684 *(case when (CriGroup = '09' and Gender = "FEMALE" and First
Offence = 'Y') then 1 else 0 end)
+2.504*(case when (CriGroup = '09' and Gender = "FEMALE" and First Offence = 'N')
then 1 else 0 end)

+1.67 *(case when Gender = "MALE" then 1 else 0 end)
-0.3584 *LgCrLrg*(case when Gender = "MALE" then 1 else 0 end)
+0.945 *RtEpi*(case when Gender = "MALE" then 1 else 0 end)
+0.543 *log(Num_Episodes)*(case when Gender = "MALE" then 1 else 0 end)
-1.5899 *LgTimeFree*(case when (Gender = "MALE" and FirstOffence = 'Y') then 1
else 0 end)
+0.1287 *LgExSer8*(case when (Gender = "MALE" and First Offence = 'Y')
then 1 else 0 end)
-1.0353 *LgTimeFree*(case when (Gender = "MALE" and First Offence = 'N') then 1
else 0 end)
+0.0127 *LgExSer8*(case when (Gender = "MALE" and First Offence = 'N')
then 1 else 0 end)

+4.9855*(case when (CriGroup = '09' and Gender = "MALE" and First Offence = 'Y')
then 1 else 0 end)

+2.5594 *(case when (CriGroup = '09' and Gender = "MALE" and First Offence
= 'N') then 1 else 0 end)
-0.2589 *(case when ((Gender = "MALE" and First Offence = 'N')
or (Gender = "FEMALE" and First
Offence = 'Y')) then 1 else 0 end)
+0.9667 *(case when Age First < 13*365.25 then 1 else 0 end)
-0.2602 *(case when First Offence = 'N' then 1 else 0 end) ))),0.0000001) as roc
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