

Tema 2 - Trabajo práctico

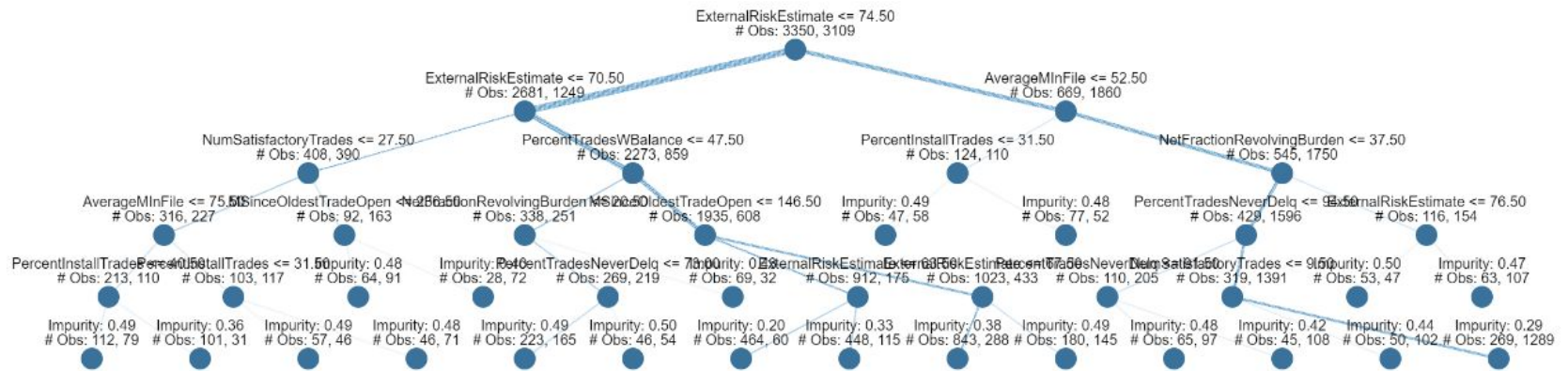
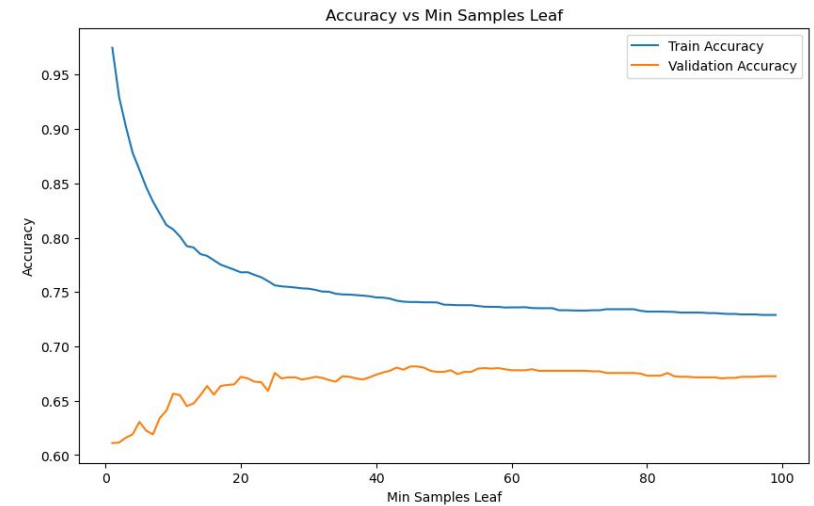
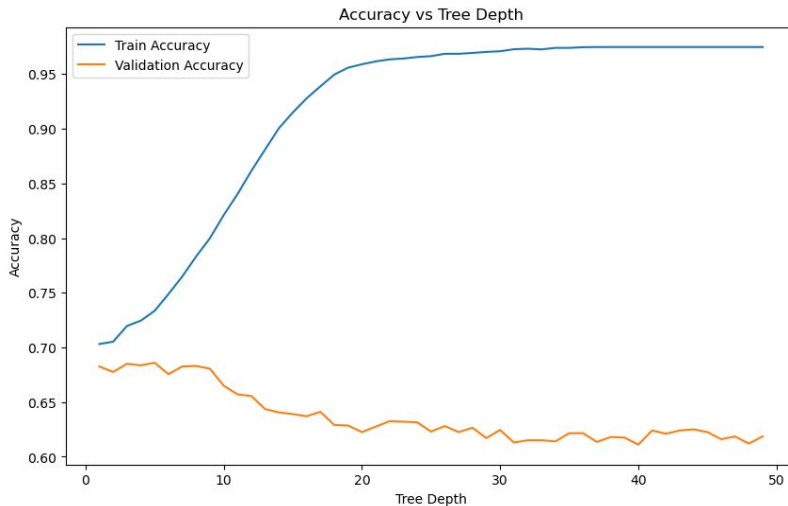
Juan Eizaguerri Serrano
Daniel Hernández Martínez
21/10/2024

Inteligencia Artificial Explicable, Máster Universitario en Inteligencia Artificial



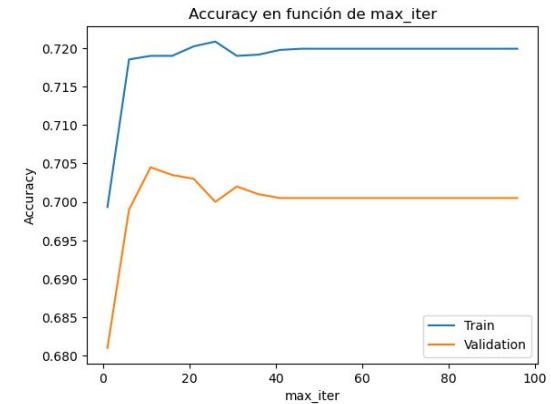
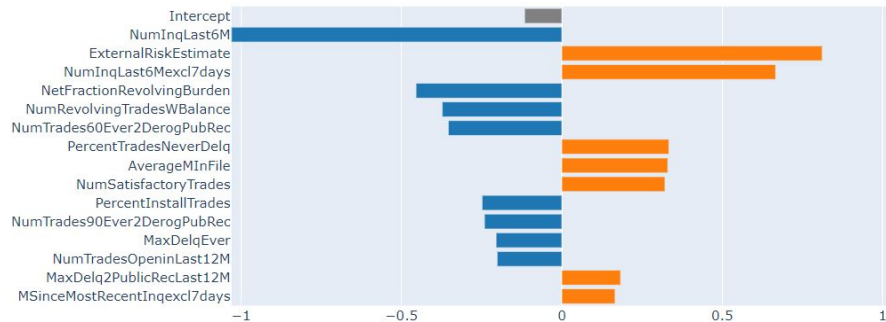
POLITÉCNICA

Modelo lógico - Árbol de decisión

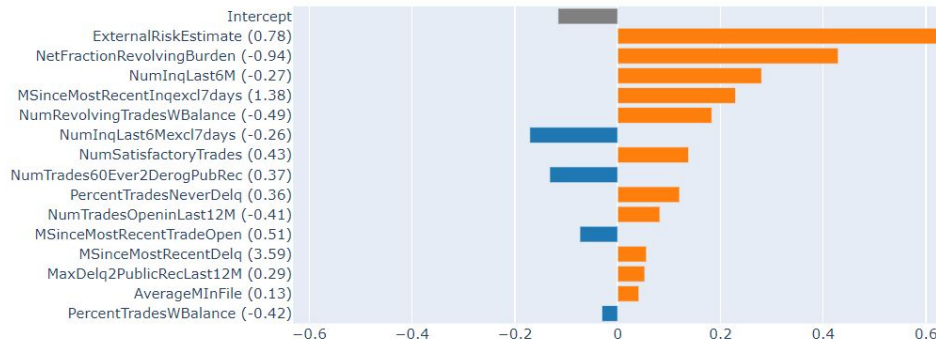


Modelo lineal - Regresión logística

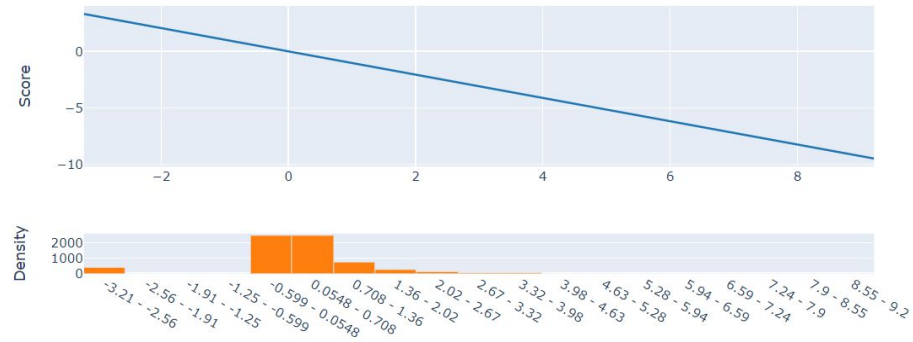
Overall Importance:
Coefficients



Actual: 0.856 | Predicted: 0.856

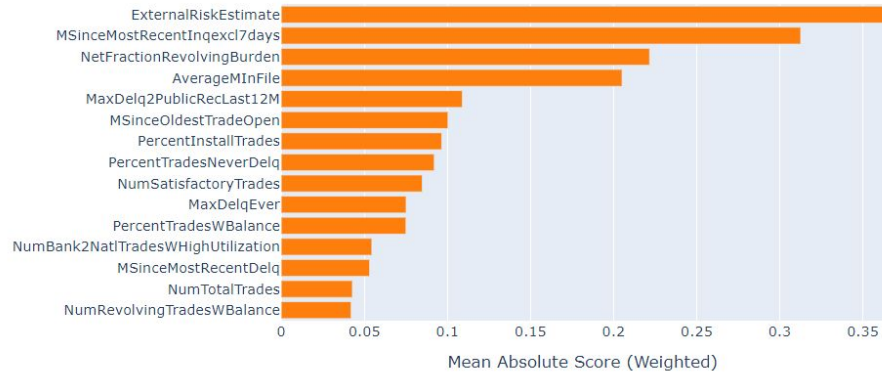


NumInqLast6M

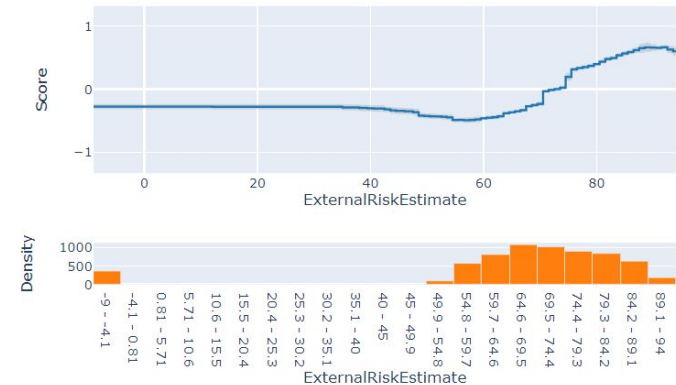


GAM - Explainable Boosting Machine

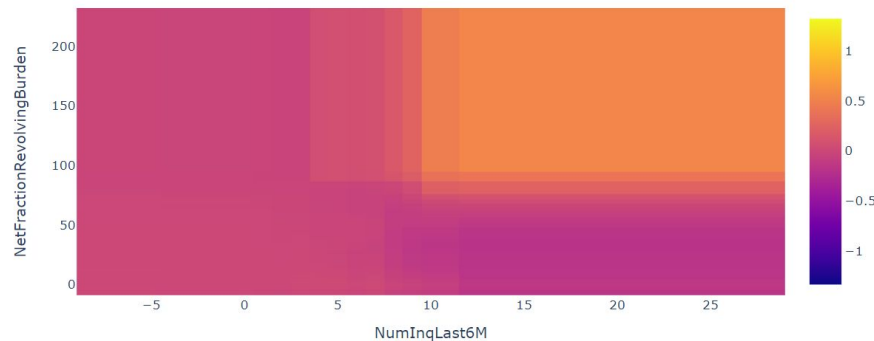
Global Term/Feature Importances



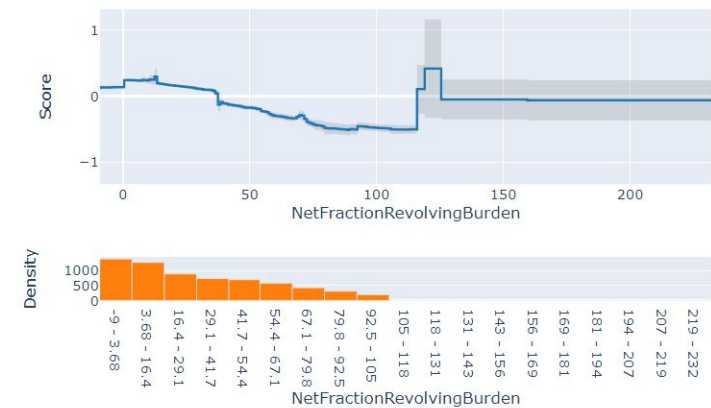
Term: ExternalRiskEstimate (continuous)



Term: NumInqLast6M & NetFractionRevolvingBurden (interaction)

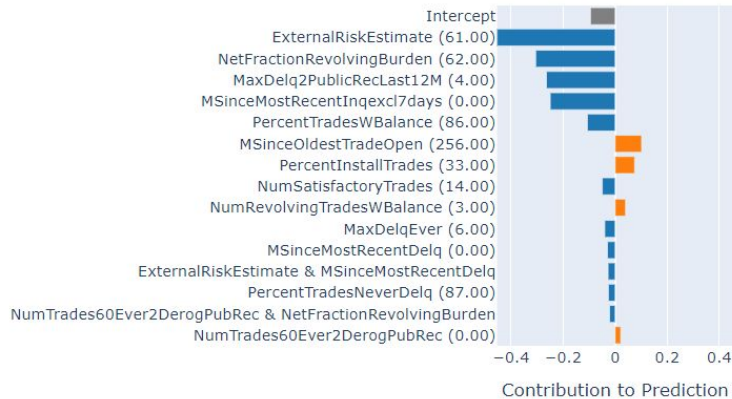


Term: NetFractionRevolvingBurden (continuous)

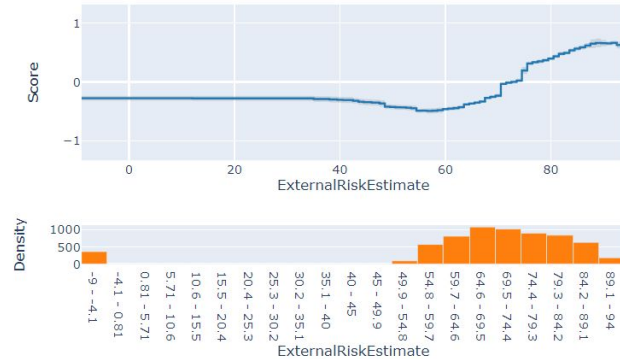


GAM - Explainable Boosting Machine

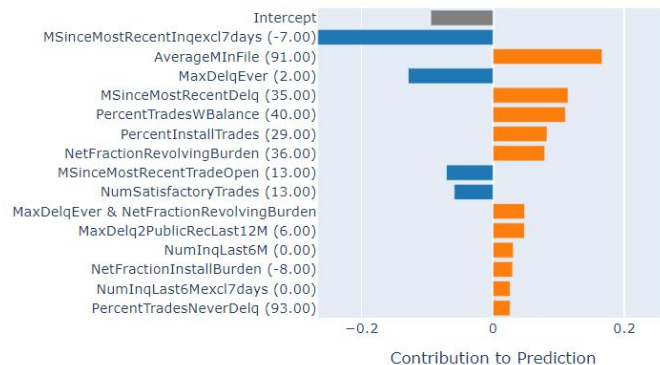
Local Explanation (Actual Class: Bad | Predicted Class: Bad)
 $\Pr(y = \text{Bad}) : 0.815 \mid \Pr(y = 0) : 0.815$



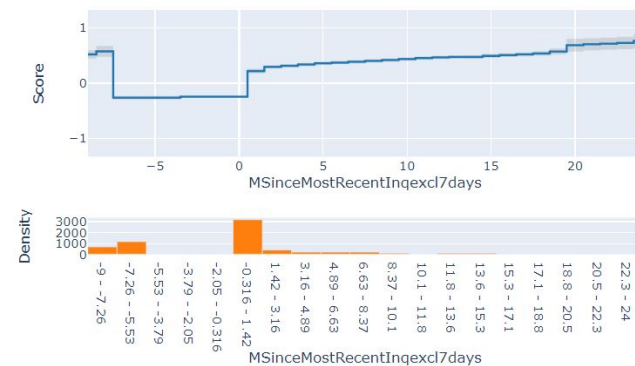
Term: ExternalRiskEstimate (continuous)



Local Explanation (Actual Class: Good | Predicted Class: Good)
 $\Pr(y = \text{Good}) : 0.537 \mid \Pr(y = 1) : 0.537$



Term: MSinceMostRecentInqexcl7days (continuous)



Resultados y conclusiones

Clasificador	Mejores parámetros	ACC _{train}	ACC _{test}	AUC
Árbol de decisión	<i>max_depth = 5</i> <i>min_samples_leaf = 100</i>	0.7240	0.7255	0.7751
Regresión logística	<i>max_iter = 100</i> <i>solver = 'lbfgs'</i>	0.7199	0.7336	0.8021
Explainable Boosting Machine	<i>inner_bag = 0</i> <i>interaction = 10</i> <i>max_bins = 102</i> <i>smoothing_rounds = 50</i>	0.7436	0.7489	0.8215
Random Forest	<i>n_estimators=600</i> <i>max_features = log2</i> <i>max_depth = 100</i> <i>criterion = log_loss</i>	0.9748	0.7341	0.8161