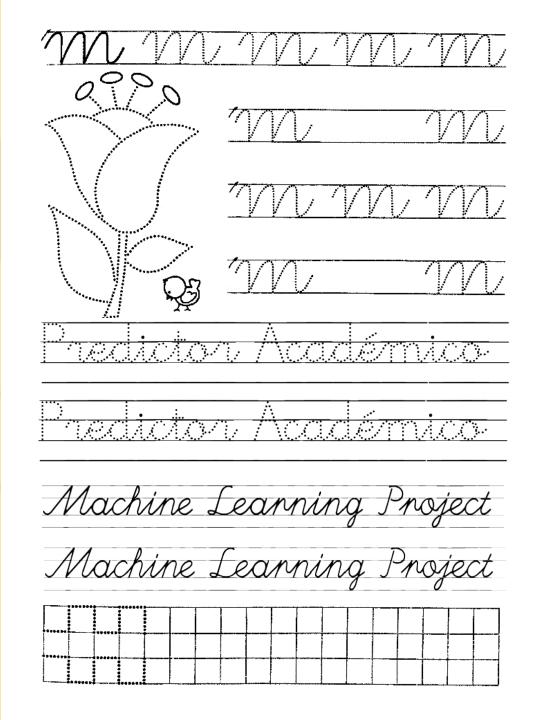
PREDICTOR Académico

Machine Learning Project

Paula García Fernández

Noviembre 2024





DATOS DE EUROSTAT

España es líder europeo en fracaso escolar y en brecha educativa entre hombres y mujeres

Todavía un 14% de los jóvenes abandona sus estudios sin completarlos, pero en el caso de los hombres, escala al 16%. La UE ha fijado un objetivo del 9% en el año 2023



Manifestación por la educación pública en Madrid. (Europa Press/Fernando Sánchez)

España lidera la UE en abandono escolar pese a ser el país con más horas lectivas

• Los alumnos de secundaria reciben 181 horas anuales más que la media europea y lo hacen en jornada concentrada

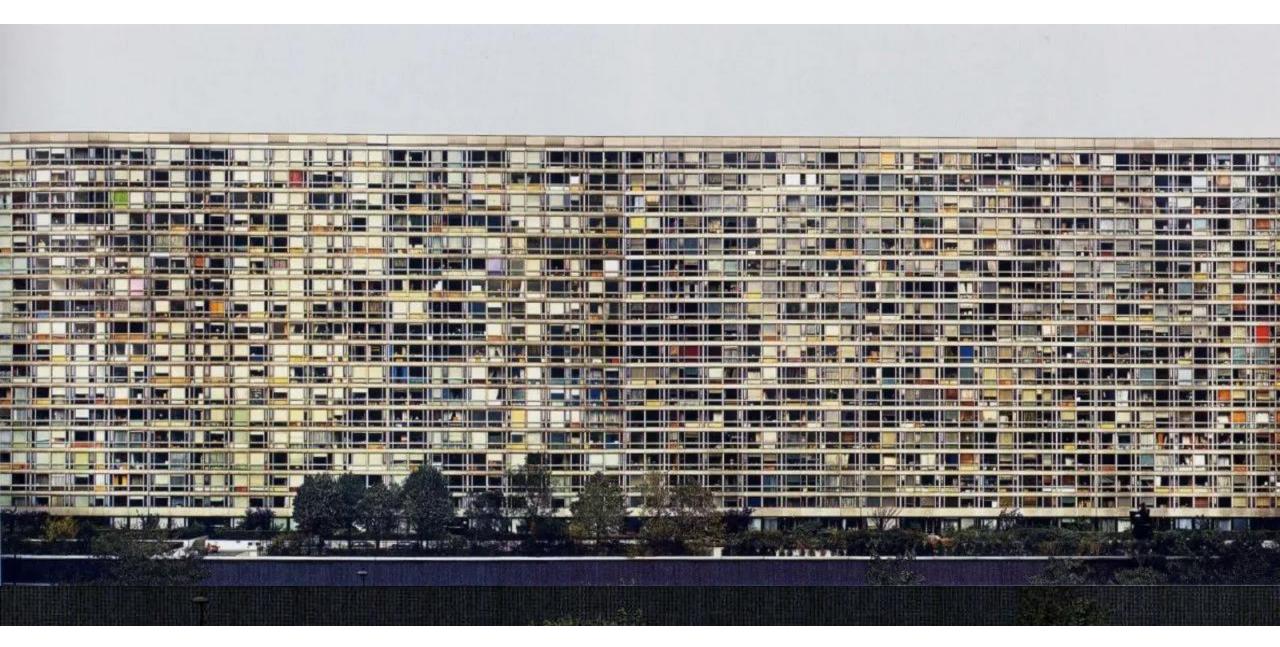


La OCDE destaca la desviación de las horas lectivas de las escuelas españolas respecto a los países europeos y de la OCDE (Ana Jiménez / Propias)

Vinculan el abandono escolar en España con el Fútbol y lo elevan al 31%, pero es falso

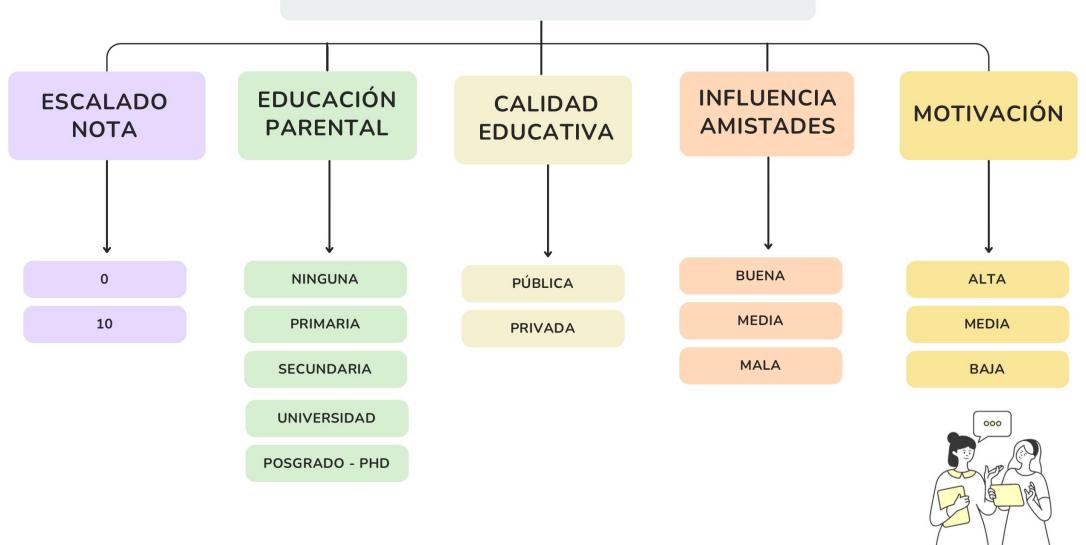






Andreas Gursky, Paris Montparnasse, 1993.

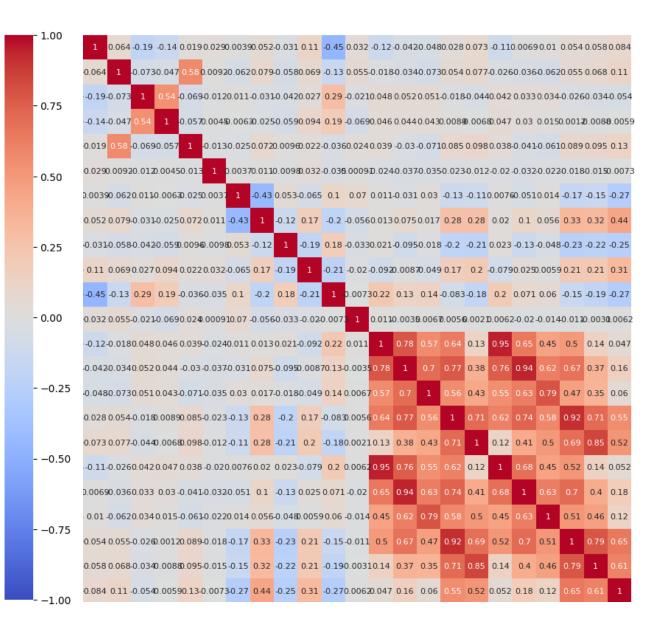
FEATURE ENGINEERING

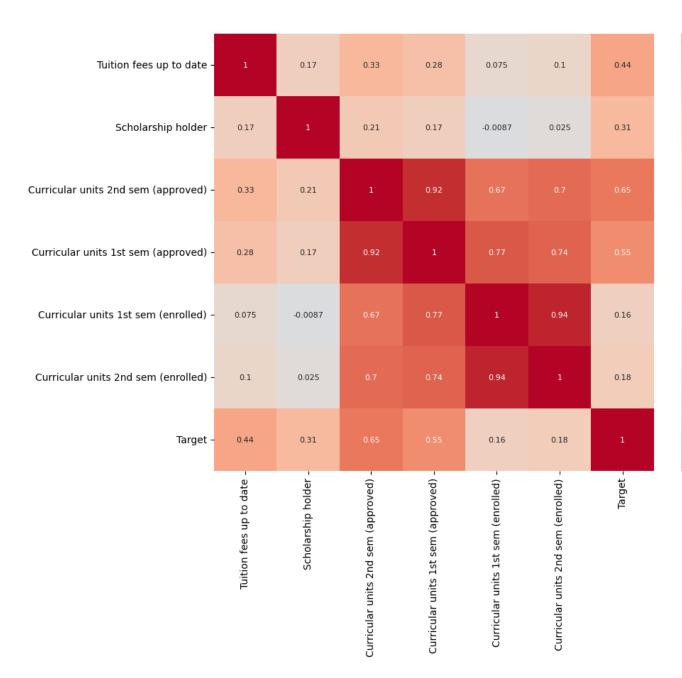


1.00 **1** D. 270. 10: 0 4 P. 207. 0 70. 0 8 90 0 8 91. 90. 1 P. 0 5 4. 0 5 . 0 102. 2 4. 0 D 70 3 90 0 9 70 0 20 10 10 70 5 20. 0 D 60 607 0 508 0 508 0 42 0 609 0 42 0 609 0 41 0 3 0. 0 5 60 0 60 0 25 0 D 90 102 0 2 9 0 . 1 $\textcolor{red}{\textbf{0.27}} \textcolor{red}{\textbf{1.0.29}} \textcolor{blue}{\textbf{0.69}} \textcolor{blue}{\textbf{3.1.49}} \textcolor{blue}{\textbf{0.0710102}} \textcolor{blue}{\textbf{1.9.098042026}} \textcolor{blue}{\textbf{0.38.30.025}} \textcolor{blue}{\textbf{0.25.120.15.190.17.5.90}} \textcolor{blue}{\textbf{0.0462.50.170.29}} \textcolor{blue}{\textbf{0.037.10.056.240.130.140.085.140.085.020}} \textcolor{blue}{\textbf{0.085.140.085.140.085.140.085.140.085.140.085.140.085.020}} \textcolor{blue}{\textbf{0.085.14$ -0.1.30.2.9<mark>1 1</mark>.0.5<mark>6.1.7</mark>0.190.052202705990505050202509<mark>0.36</mark>.0216.0660610.101.078.28.0301.18.04050803080601.039.101.030.04030718.06.02404.00410308094 9.04P206B905 1 0.088400P268B2036604.049402P201-9.120.090.042.02800P501B0366072508<mark>0.340.260.190.38</mark>.03P207<mark>68420.280.20.346</mark>.03B.001.028801P4038 $-0.270.3 \, \underline{\textbf{D}}. \underline{\textbf{1-10}}. 0.3 \, \underline{\textbf{1-0}}. 0.08206 \, \underline{\textbf{0}}. 0.30.140.140.034.003.01 \, \underline{\textbf{0.10}}. \underline{\textbf{20}}. 0.0990.0 \underline{\textbf{9.99}}. \underline{\textbf{9.99}}. 0.30.1 \, \underline{\textbf{1-10}}. 403.03.0.140.0420.0 \underline{\textbf{400}}. \underline{\textbf{0.100}}. \underline{\textbf{0.100}}. \underline{\textbf{0.100}}. 0.0900.0 \underline{\textbf{0.100}}. \underline{\textbf{0.100$ - 0.75 9.070.420.090.00238 1 0.089.02502.008909816.16.160.1B002410.06709507021-0.02410.0709.10.0108012.01.05050909490.10089220.10.0010702062 +,00899-120-2770366-09-029505-4 10-03807801008309304850824660380-20000200<mark>03</mark>0091-927101904560350020470290-3300209-3300000-3300000-330000-330000-330000-330000-33000-3000-30000-33000-33000-33000-33000-33000-33000-33000-33000-33000-3300 - 0.50 -0.240.31<mark>0.35</mark>0.090.240.130.001093.50707.06070723907.4006<mark>11</mark>.0905.D904.110.103.086-8700072910.07020705050707080312090604060706070723907.4006112.0099066.13 - 0.25 9.0-270 0250 2-6.02 0-2990 0234909 09320 0 00450 9-49 24 00.300 1 0 00450 9-30 10 00450 9-30 20 10 00450 9-3 9.03<u>9.13</u>9.066021903<u>9.1</u>0.0662246011006618870870870325094005<mark>11</mark>0.4610918061<mark>5.10.07</mark>.034.030.130.10.00.040405051014.130.150.07.0418.020.040.27 +00 D1190.10.0950 B1095 0580 2040 420 5590 1040 2050 905 130 03965 B.12 1 0.19.18 0.0930 20.0 9050 180.20 2010 0680 2B.16.0 488 2B.20 20 058 938 038 034 50 22 25 - 0.00 9.520.5 $\frac{1}{2}$ 0.2 $\frac{1}{2}$ 0.2 $\frac{1}{2}$ 0.1 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 0.3 $\frac{1}{2}$ 0.3 $\frac{1}{2}$ 0.3 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 0.2 $\frac{1}{2}$ 0.0 $\frac{1}{2}$ 9.056, 1-0.015 3-0.0420 709 0-3040 2010 5020 0-400 2600 20.06.0 0020 3070 3010 745 00 500 87403 00 3578 1 0.7 0.7 0.3 80.1 50.7 60.9 40.6 20.6 70.3 07.0 76.0 4.0 501.0 407.1 6 - -0.25 9.059.240.08526.0453140.073301905010403013007300730070108049910400607570.7 1 0.560.430.270.550.630.759.470.350.16.0670089910.06 9.0-3280 3070 3 8.1 9.0 2780 1280 9340 95.6 1.8 0 899 2760 2760 2760 2850 597.0 26.1 39.2 80.2 0.1 -29.0 88 30 5 5 6 40.7 70.5 6 1 0.7 0.0 10.6 6 20.7 40.5 80.9 20.7 40.0 899 429 0 3280 00.5 9.069.10:069.30:070:010-07060:994.4063030.00:098070:010.10.00:0\$.042095.0B9032039.0P.04200020B500670P400B609603Q.020140.07006807.078.0P.1.15.2Q.030108.06 1 0.140.120.107.00B506 0.40.03503Q.108.075 9.068.240.18.078.10.19.02600404204.0905.0098338096.020070600.020070600.020050.950.760.550.620.120.14 1.0.680.450.520.140.0850120013005209.040.18.038, 42006, 9994.0360, 29038.08, 0.300, 29038.09, 0.3210, 32204, 0.406, 0.3205, 0.10.12, 0.040, 9.030.140.0403.280.00.0904.06020303040405.0407030406010306020201040505004.0050900.0104.450.620.759.580.50.170.450.63 1 0.510.460.107.0505001.4020.12 9.050808950730.20.05940D105560250260400203010890765018.170.330.280.280.180.01.D.55.6670.470.920.60700165520.70.51 1 0.740.0502040.0207015.6 - -0.75 9.026.046.02703E:01102C:0204014:0E004202.90039E0342016:07.09E505E:061.040.01306E9076.1-6.045905 0.1.00.086.070.1-70.050.06 9.0 D90730.10.00.0670.10.00.3050132.12.075.130.12.030.12.04040030950B.065047008.D1B.06.0657040.00.035013806505B.04002350410.0.035 -0.10.24.0940380840621-0.03568400590770511130.1380078219.30.10070062040.160.060.55.05.00.075050.180.120.650.61-0.0.0042.09.05.05.1 - -1.00

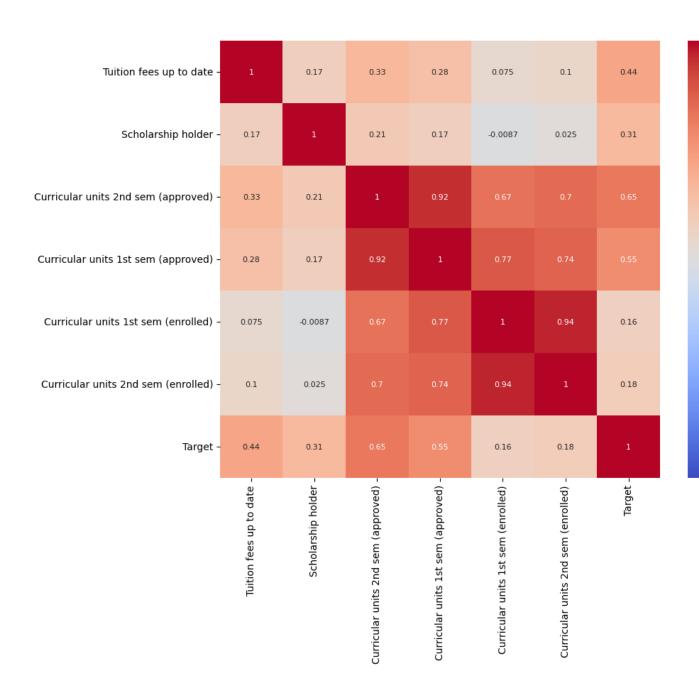
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- 0.75

- 0.50

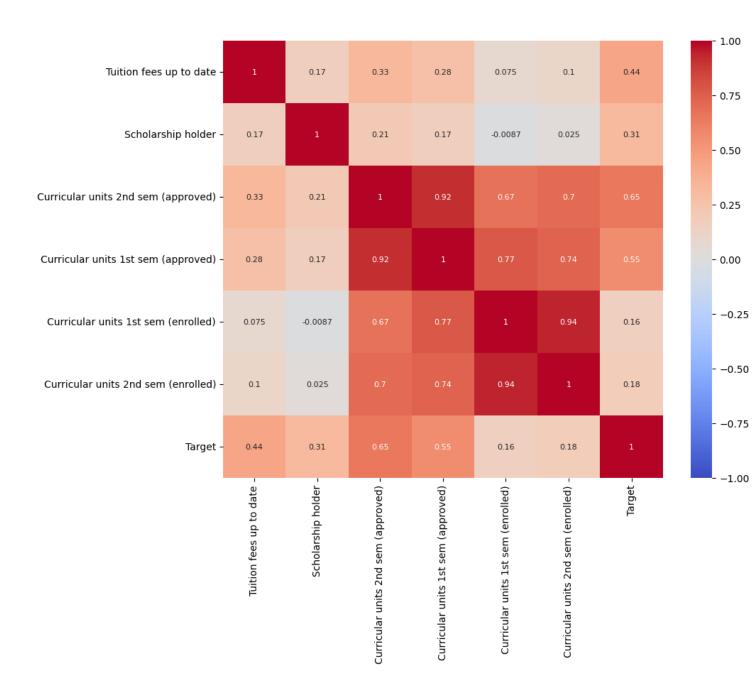
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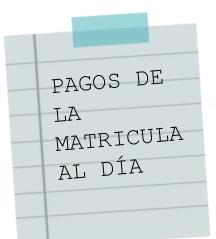
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- -0.25

- -0.50

- -0.75





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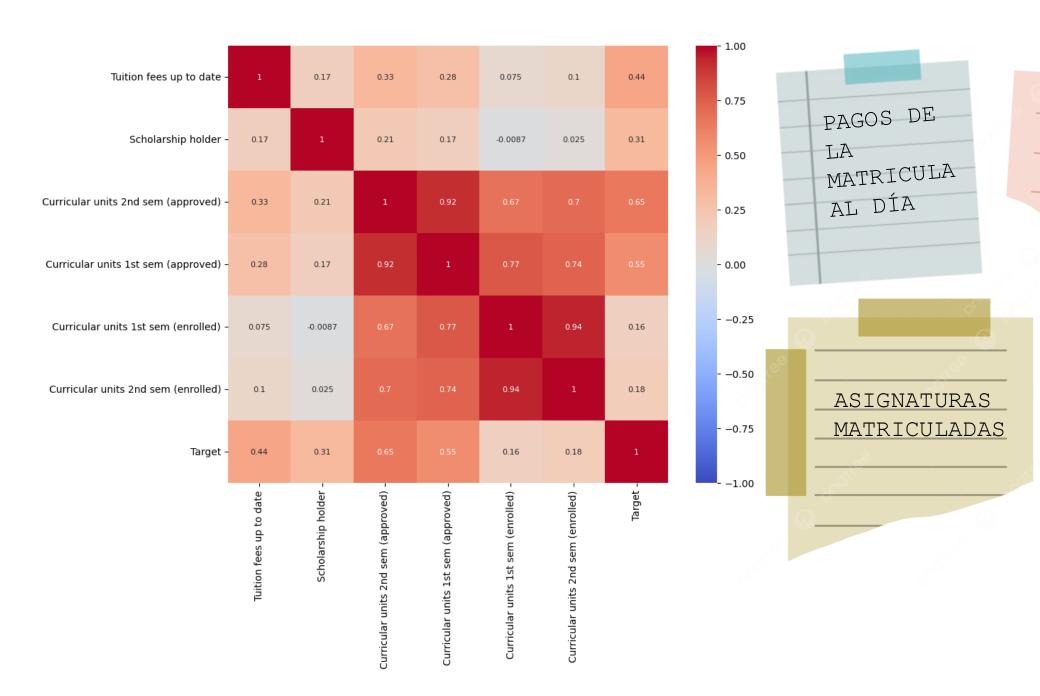
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- 0.25

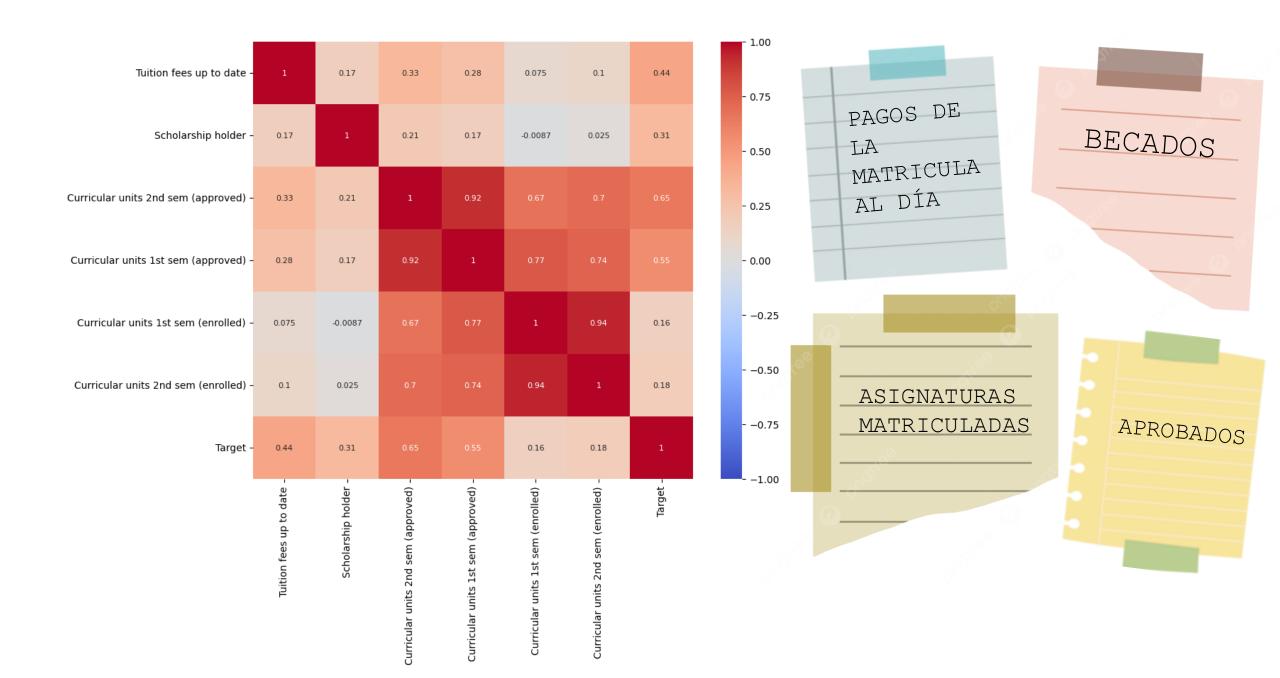
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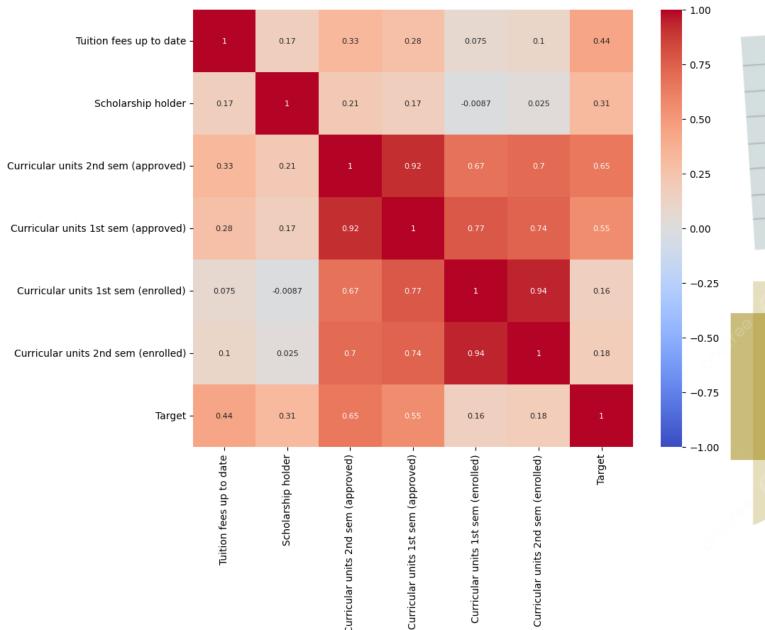
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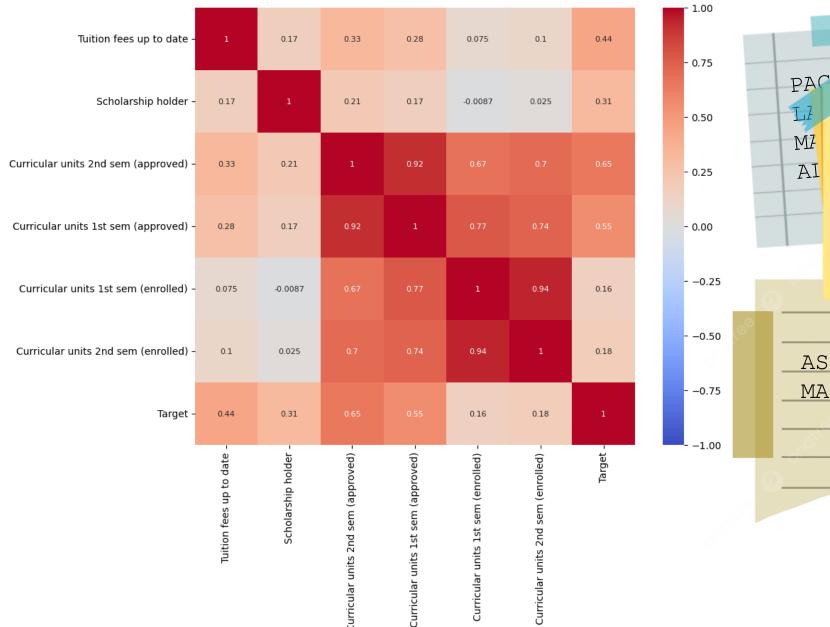


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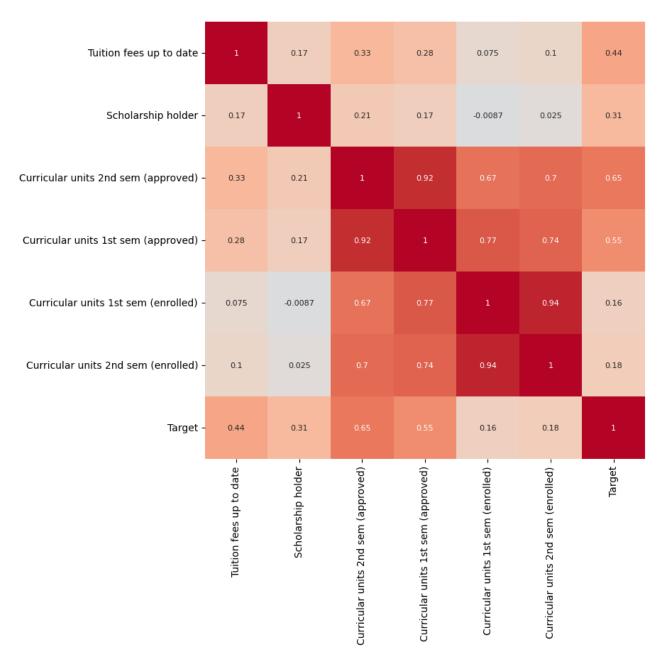


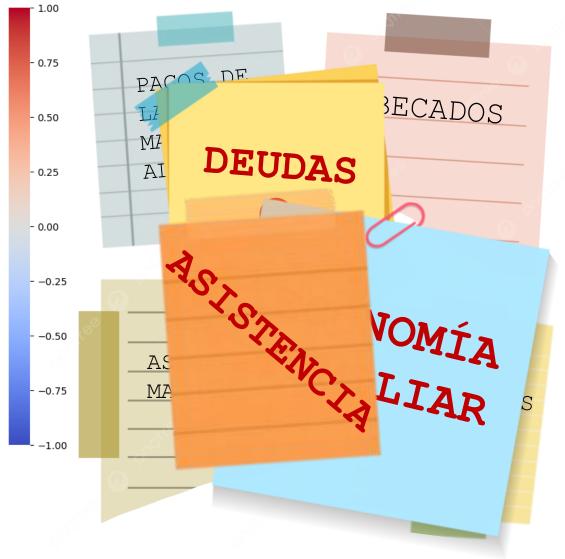


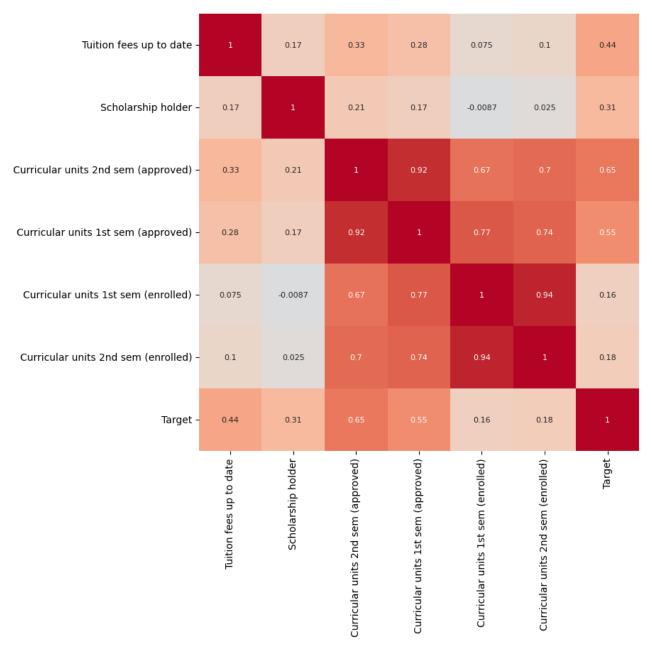




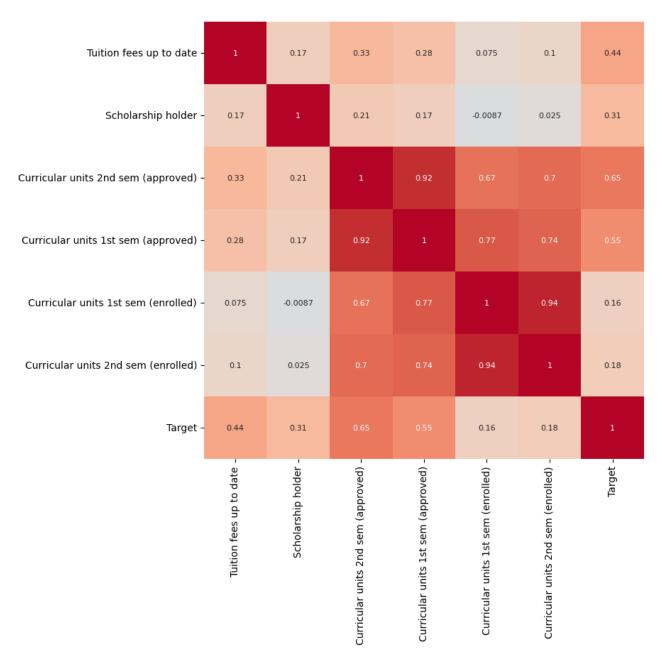




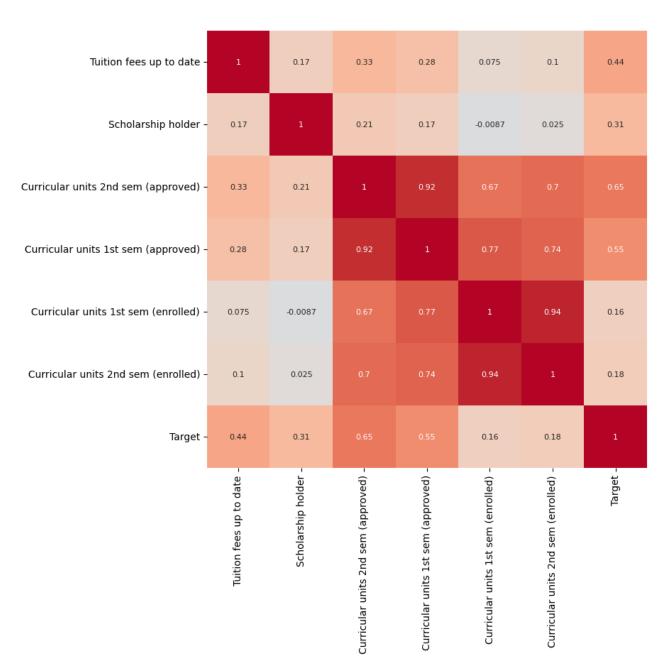








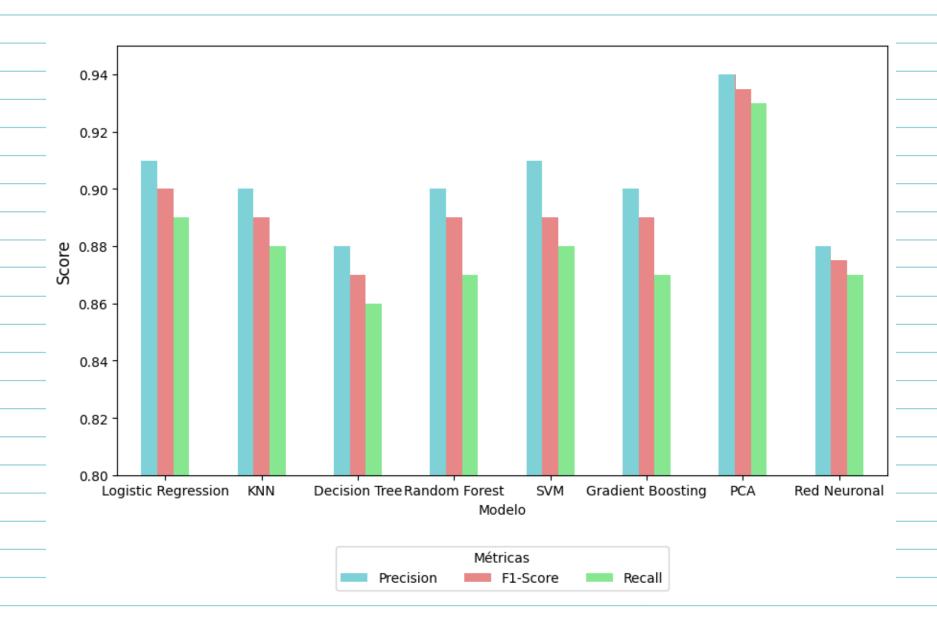




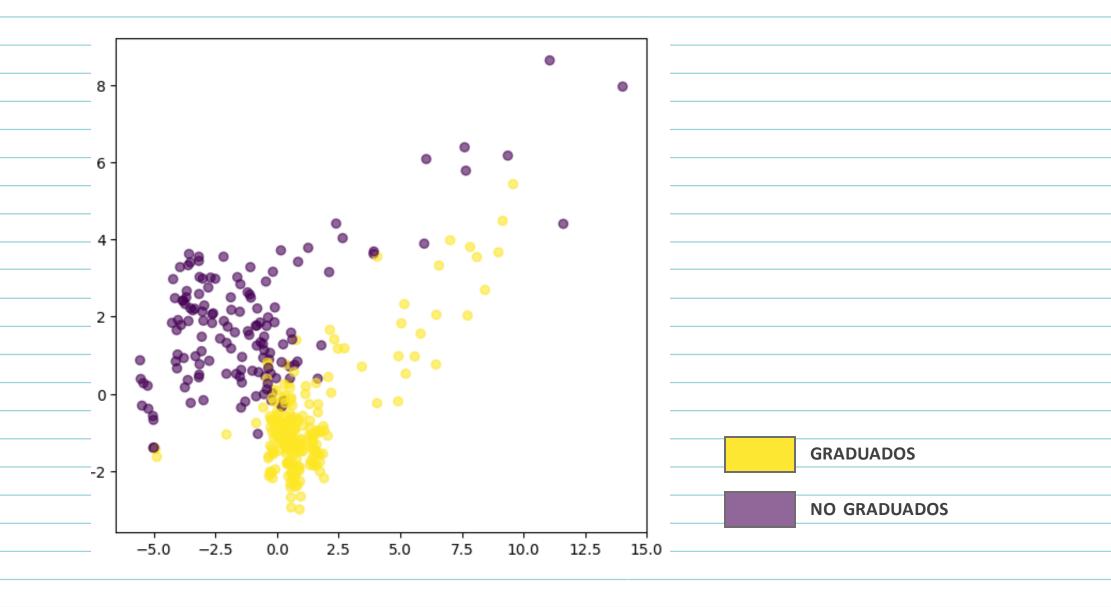




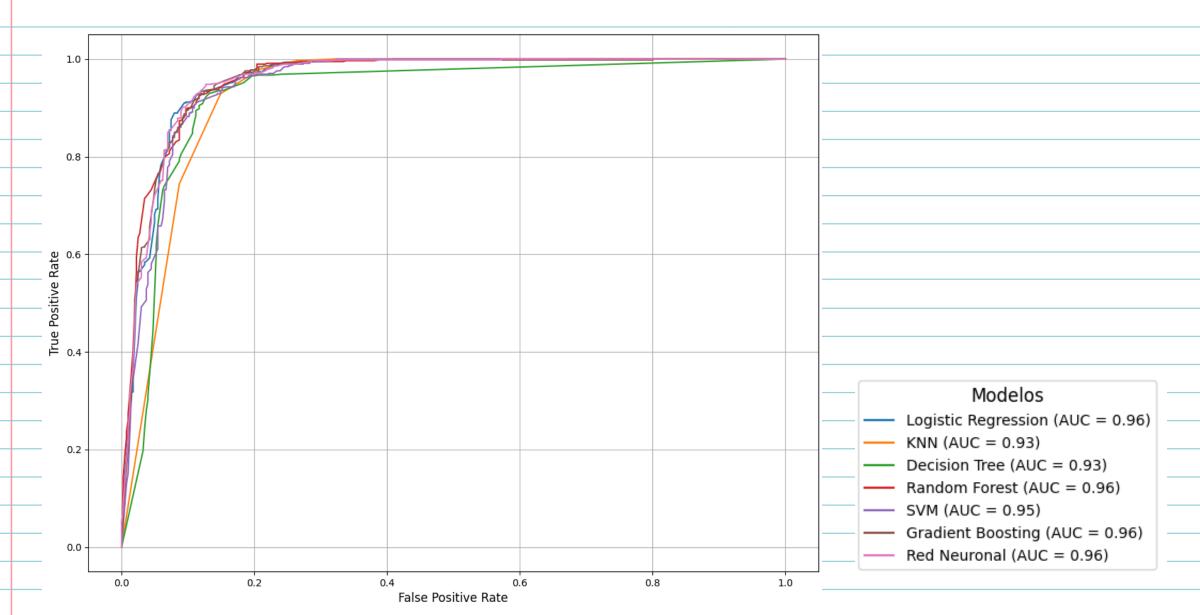
Modelos



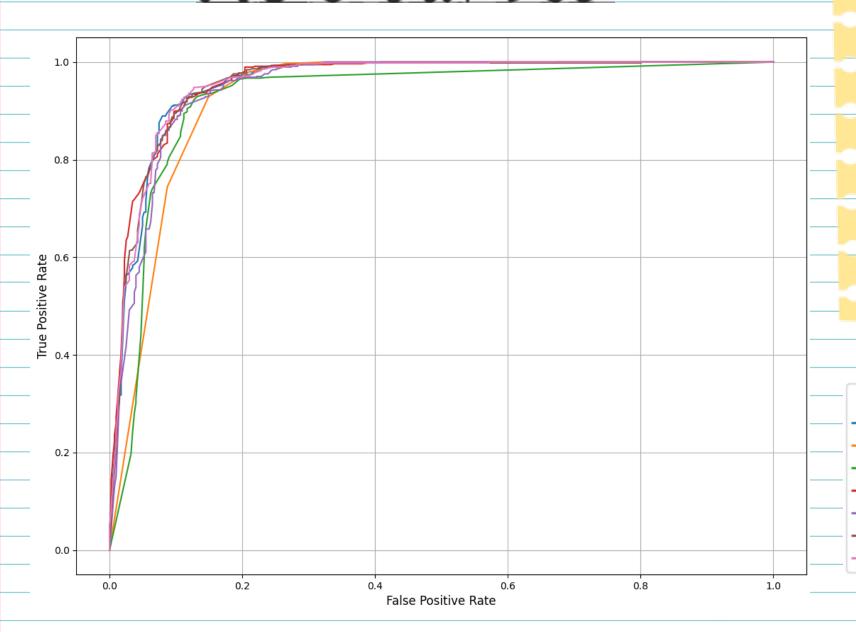
PCA - Logistic Regression



RQC curves



RQC curves



SVM

Standard Scaler

$$- C = 0.1$$

- kernel:"linear"

- gamma = "scale"

Modelos

Logistic Regression (AUC = 0.96)

KNN (AUC = 0.93)

Decision Tree (AUC = 0.93)

Random Forest (AUC = 0.96)

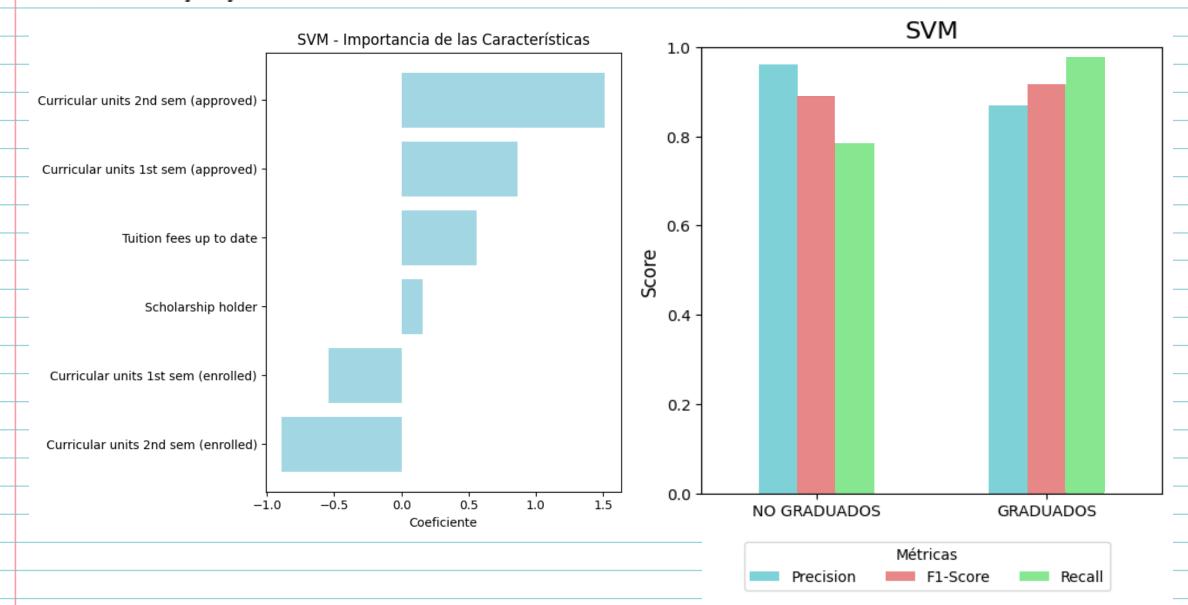
SVM (AUC = 0.95)

Gradient Boosting (AUC = 0.96)

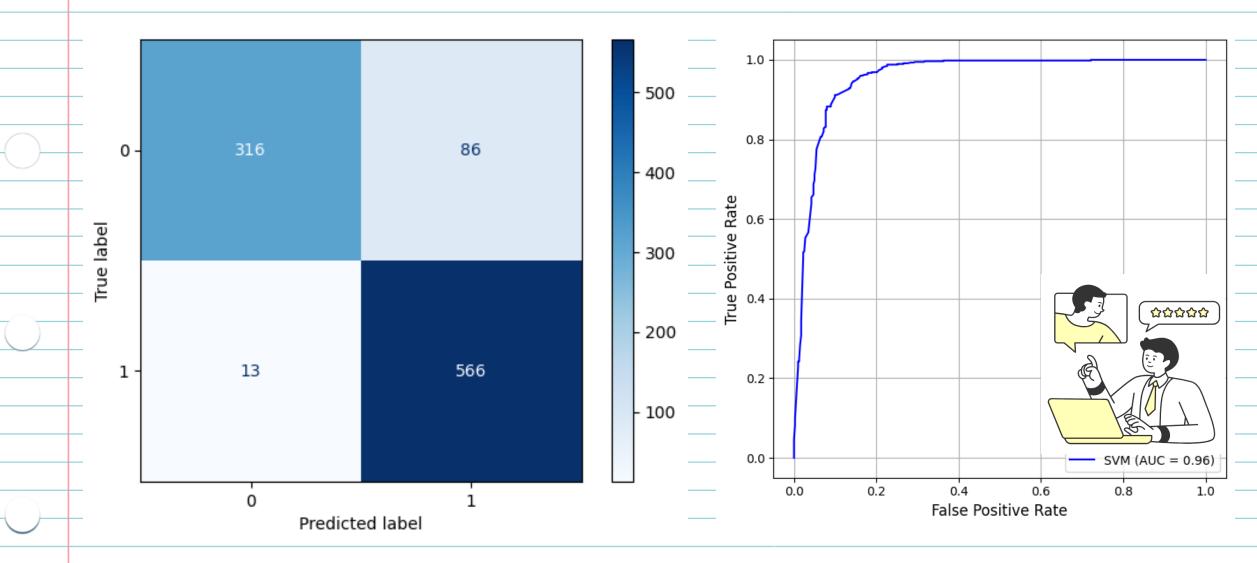
— Red Neuronal (AUC = 0.96)

curves 1.0 CLASIFICACIÓN 0.8 ≥" Modelos Logistic Regression (AUC = 0.96) KNN (AUC = 0.93)0.2 Decision Tree (AUC = 0.93) Random Forest (AUC = 0.96) SVM (AUC = 0.95) Gradient Boosting (AUC = 0.96) 0.0 -Red Neuronal (AUC = 0.96) 0.0 0.2 0.4 0.6 0.8 1.0 False Positive Rate

Support Vector Machine



Support Vector Machine



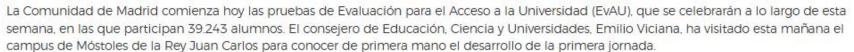
Más de 39.000 alumnos comienzan hoy los exámenes de la EvAU en los campus madrileños













		Código	TITULACIONES DE GRADO	Grupo 1 Ord.	Centro	Especialidad	NOTA FINAL
	0	0001	Arqueología	5.000	Universidad Complutense de Madrid	Humanidades y Artes	5.000
	1	0002	Bellas Artes	10.115	Universidad Complutense de Madrid	Humanidades y Artes	7.225
┸	2	0019	Ciencias de las Religiones	5.000	Universidad Complutense de Madrid	Ciencias	5.000
\perp	3	0004	Conservación y Restauración del Patrimonio Cul	10.100	Universidad Complutense de Madrid	Humanidades y Artes	7.214
4	4	0005	Diseño	11.818	Universidad Complutense de Madrid	Humanidades y Artes	8.441
\perp							
+	567	0842	Derecho (Semipresencial)	5.000	CEDEU	Ciencias Sociales-Jurídicas	5.000
+	568	0931	Marketing	5.000	CEDEU	Ciencias Sociales-Jurídicas	5.000
+	569	0924	Protocolo, Organización de Eventos y Comunicac	5.000	CEDEU	Ciencias Sociales-Jurídicas	5.000
+	570	0942	Administración y Dirección de Empresas	5.000	IUNIT	Ciencias Sociales-Jurídicas	5.000
+	571	0943	Administración y Dirección de Empresas (A dist	5.000	IUNIT	Ciencias Sociales-Jurídicas	5.000

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PREDICTOR Académico

Machine Learning Project

Paula García Fernández

Noviembre 2024



