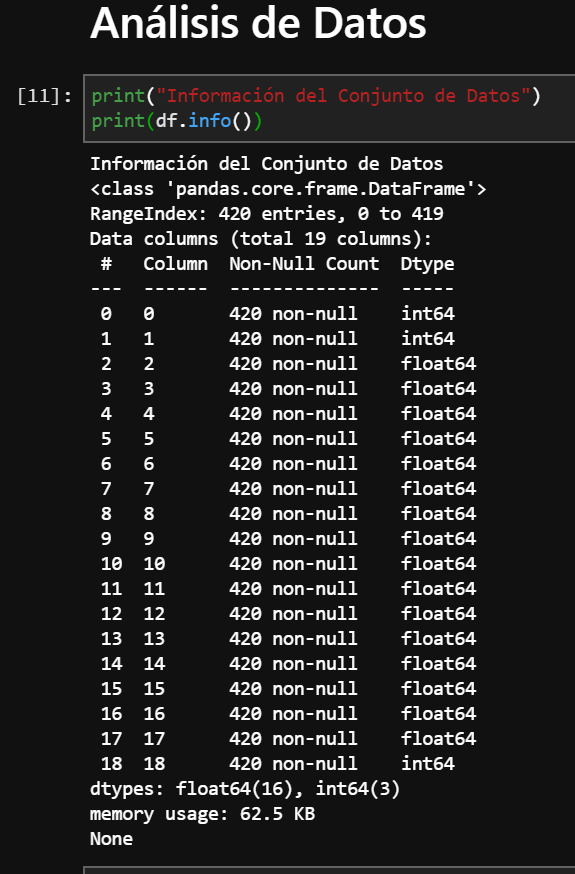
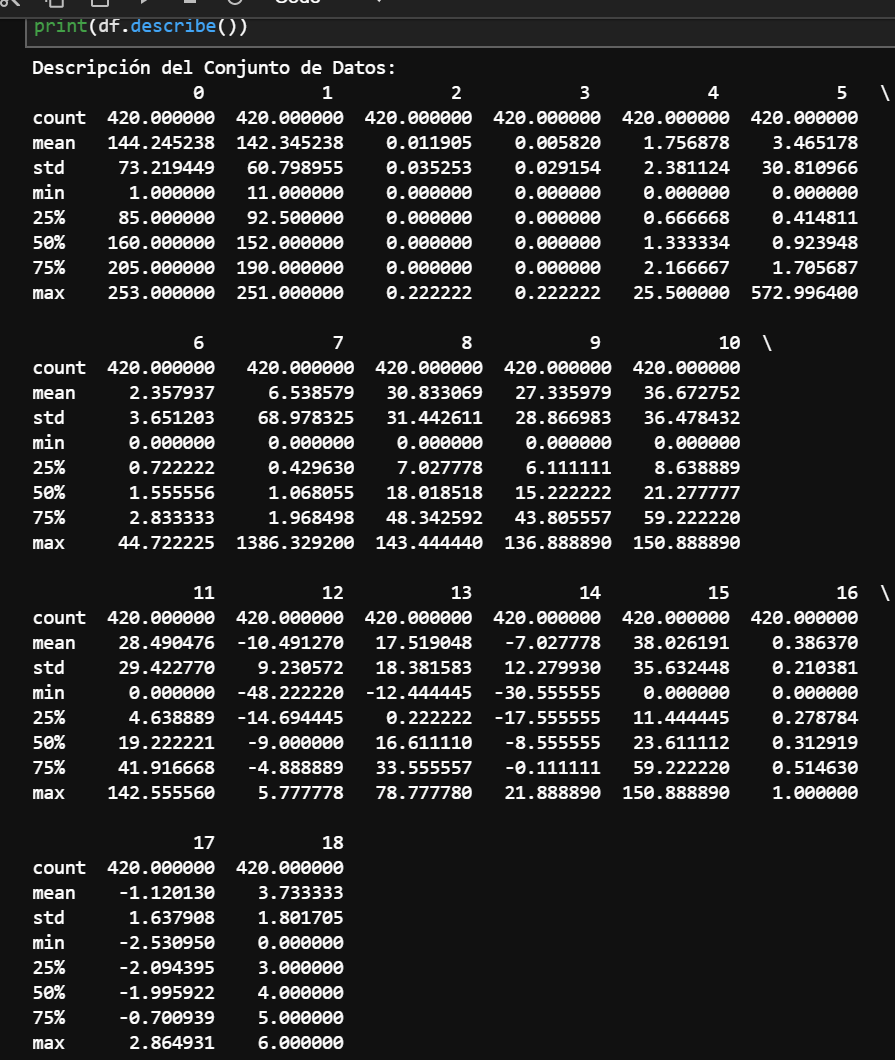
**Avances**

Añadidos {

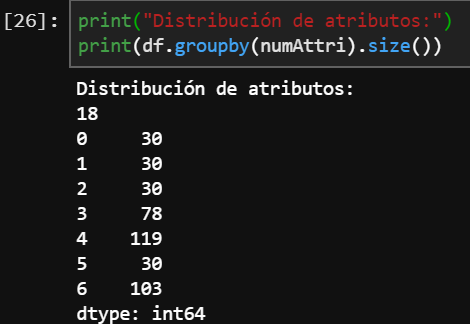
df.info()-> nos indica el numero de datos que contienen todas las columnas, también nos brinda si tiene datos(int o float).



df.describe()-> nos brinda los datos estadísticos del conjunto de datos

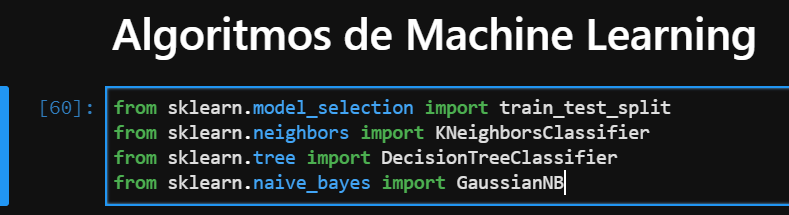


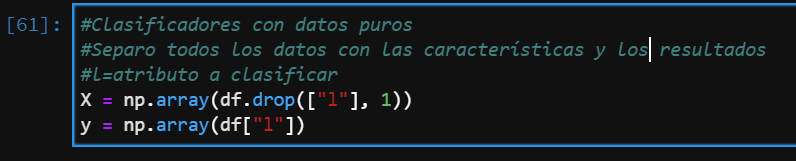
df.groupby(numAttri)->requiere que especifique que columna clasificaré, así que este ejemplo me basé en la última columna que es igual al número de atributos, también incluye la distribución de cada atributo por clase.

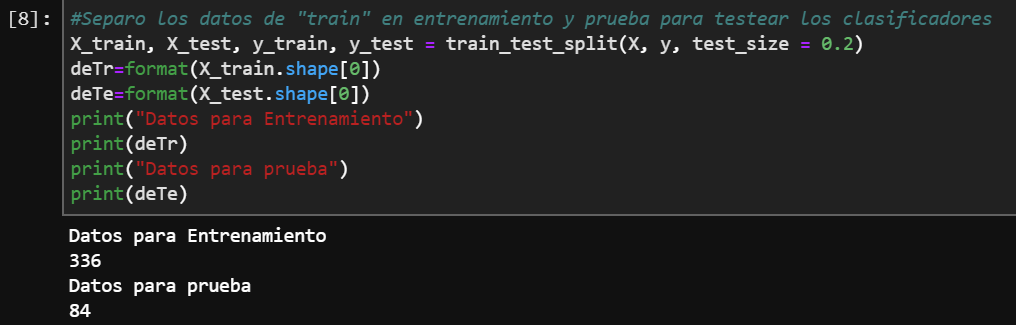


}

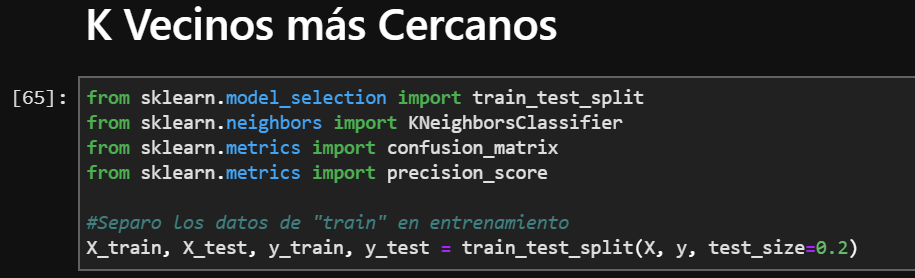
**Clasificadores**

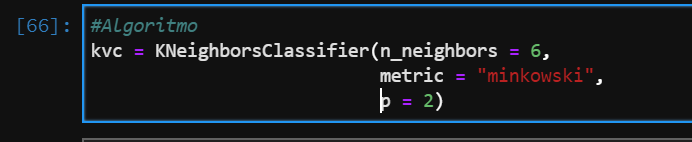




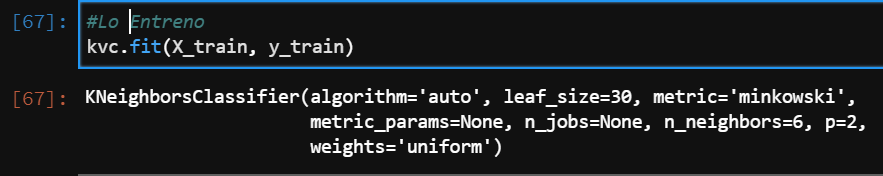


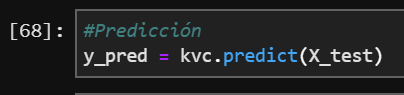
**K Vecinos más Cercanos**





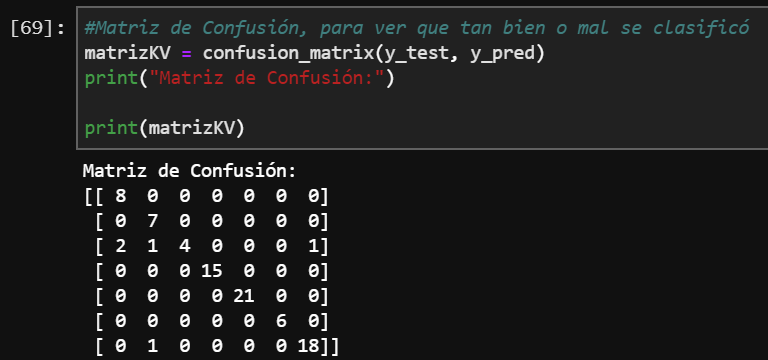
Se entrena el clasificador

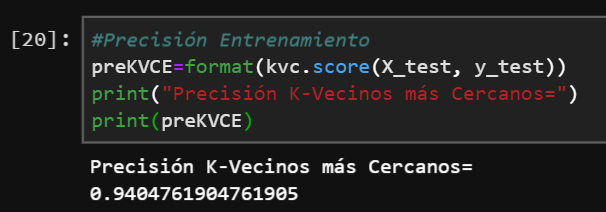


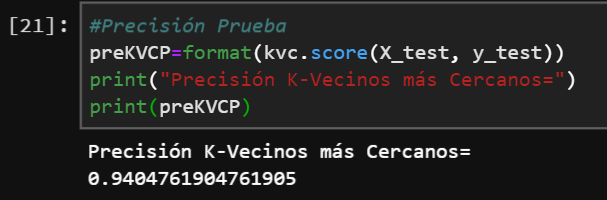


Verificamos la matriz

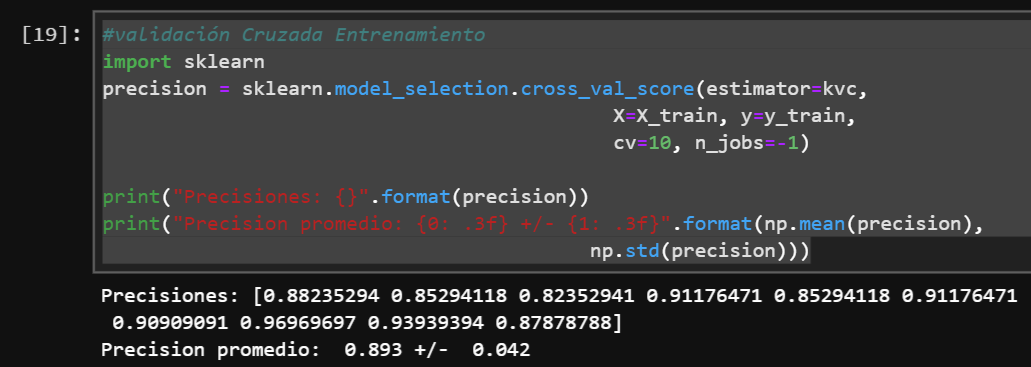
* Diagonal principal: datos predichos correctamente
* Diagonal secundaria: errores







Validación Cruzada



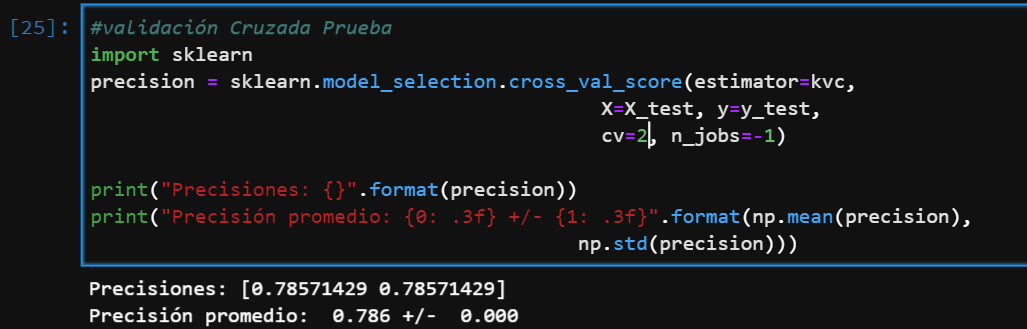
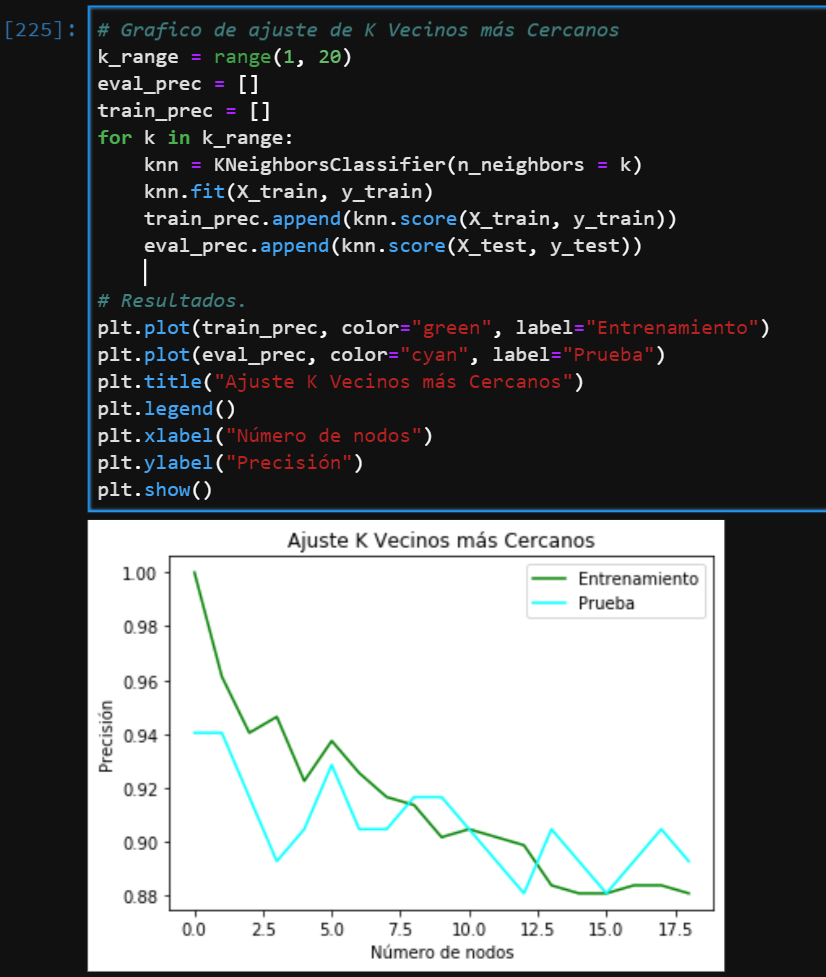
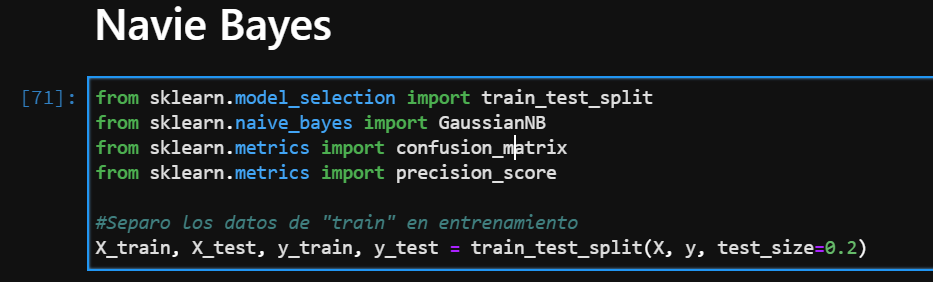


Gráfico de Ajuste

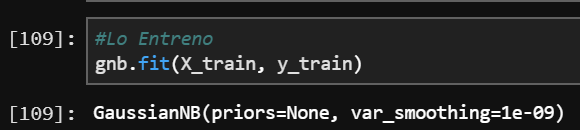


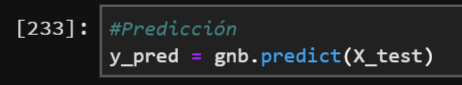
**Navie Bayes**





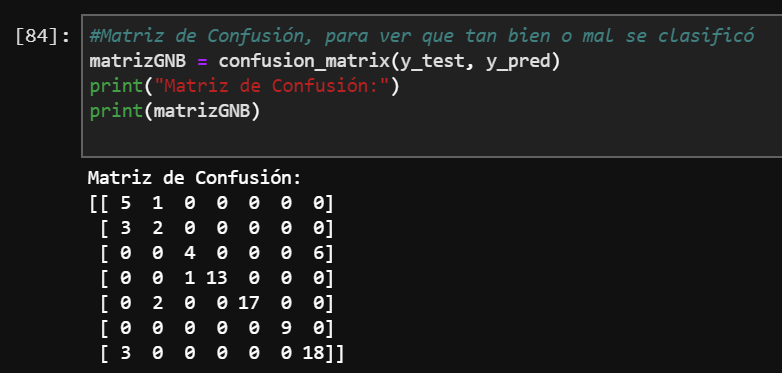
Se entrena el clasificador



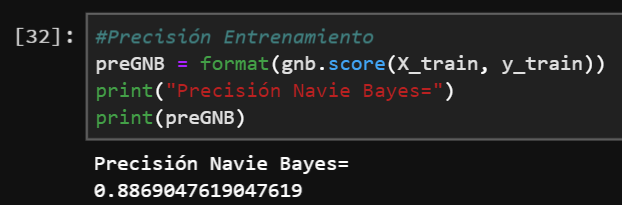


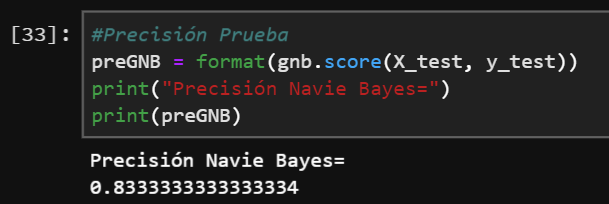
Verificamos la matriz

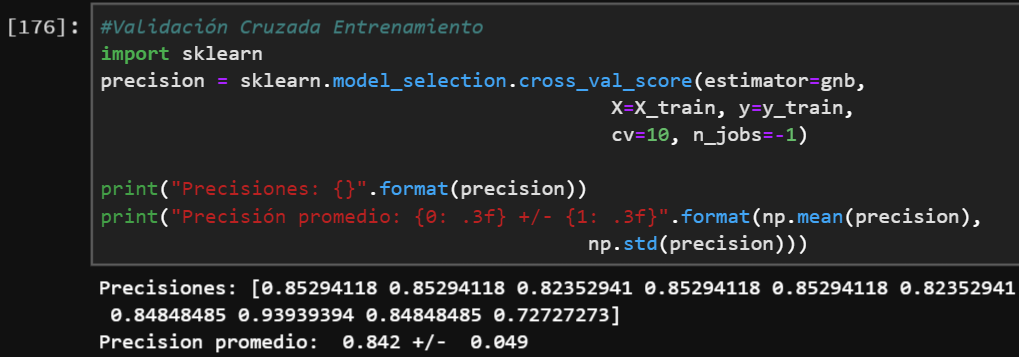
* Diagonal principal: datos predichos correctamente
* Diagonal secundaria: errores



Se predice con el modelo entrenado anteriormente y los datos de prueba





Validación Cruzada  


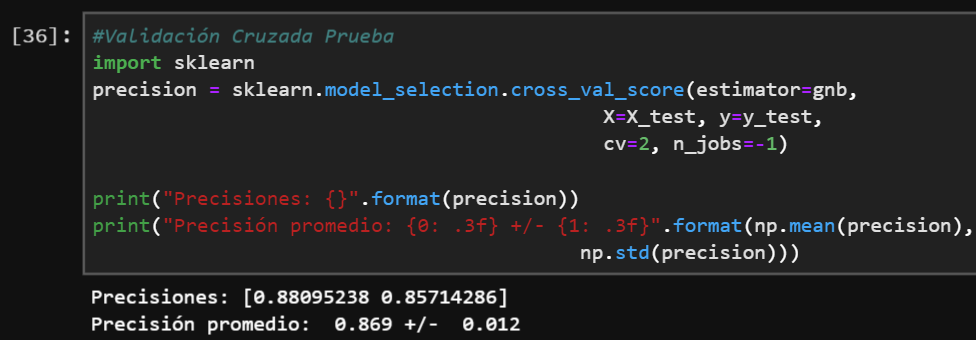
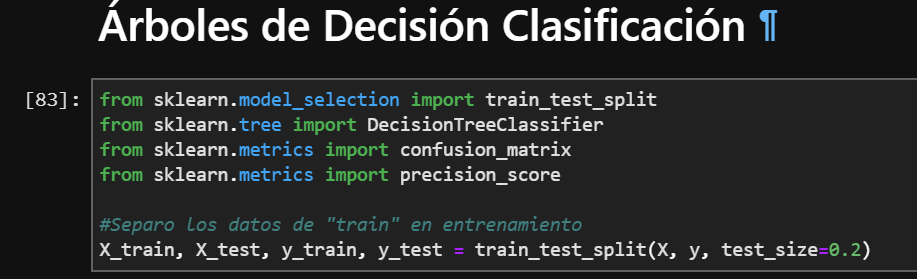


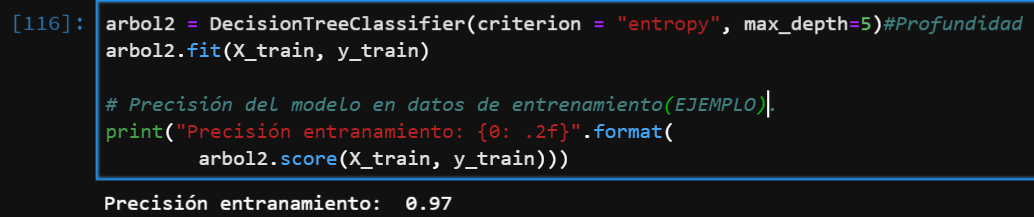
Gráfico de Ajuste (Pendiente)

**Árbol de Decisión**

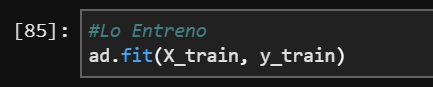


Parámetro a criterio(entropía)

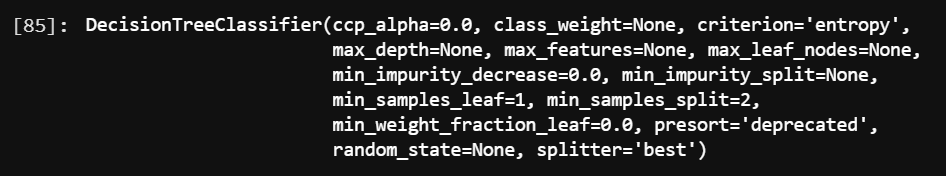


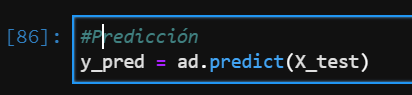


Se entrena el clasificador



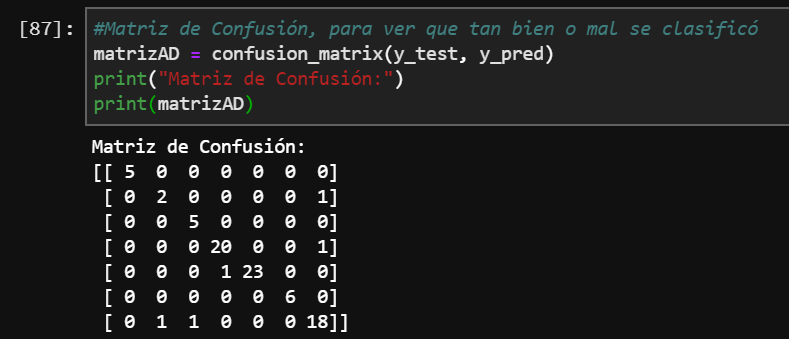
Parámetros



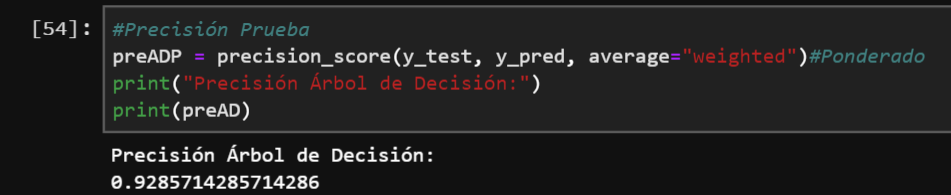
Se predice con el modelo entrenado anteriormente y los datos de prueba  


Verificamos la matriz

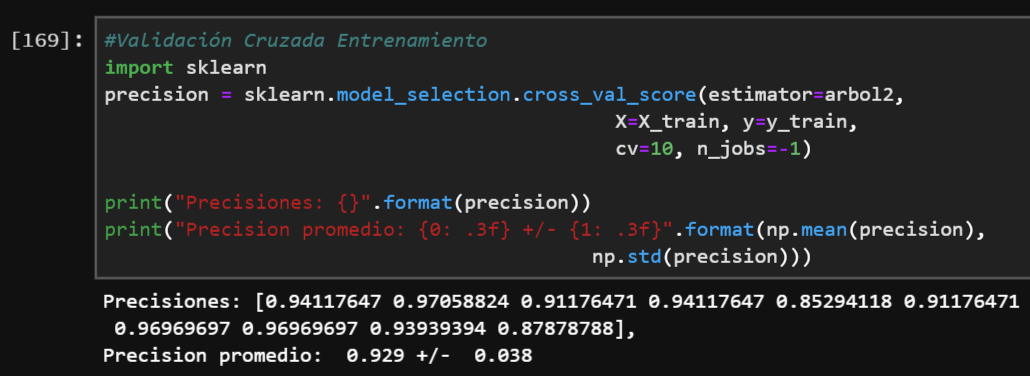
* Diagonal principal: datos predichos correctamente
* Diagonal secundaria: errores



Precisión de este clasificador.



Validación Cruzada



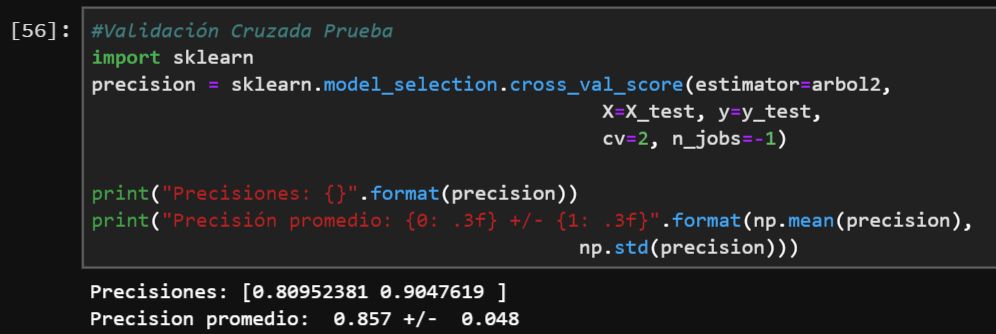
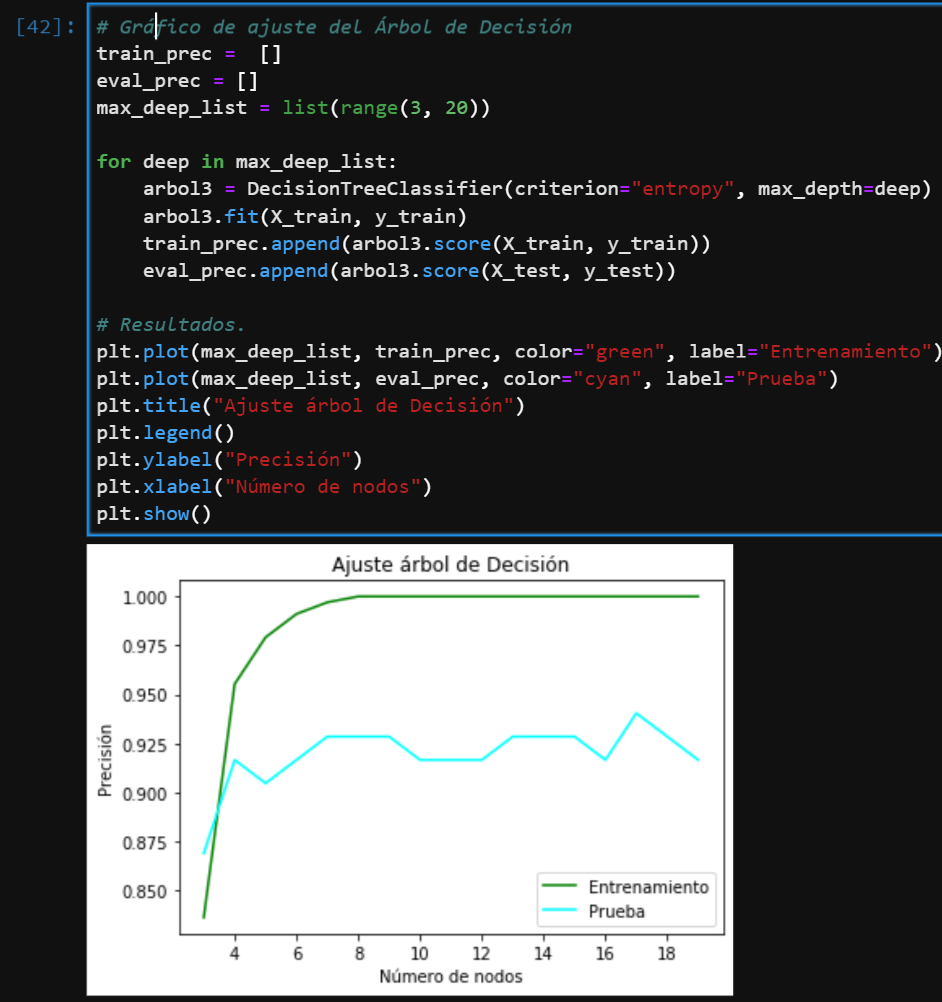
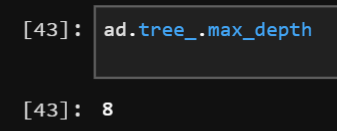


Gráfico de Ajuste





**Biografía**

https://towardsdatascience.com/train-test-split-and-cross-validation-in-python-80b61beca4b6

https://eprints.ucm.es/48800/1/Memoria%20TFM%20Machine%20Learning\_Juan\_Zamorano\_para\_difundir%20%282%29.pdf