

# MADRID HOUSING



Machine Learning Project  
SEBASTIAN POMI

# INTRODUCCIÓN



O1

E  
D  
A

O2

.....  
**ENTRENAMIENTO Y  
VALIDACIÓN**

O3

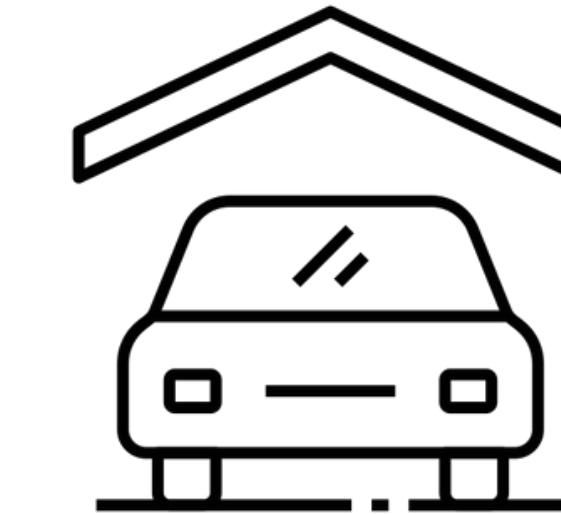
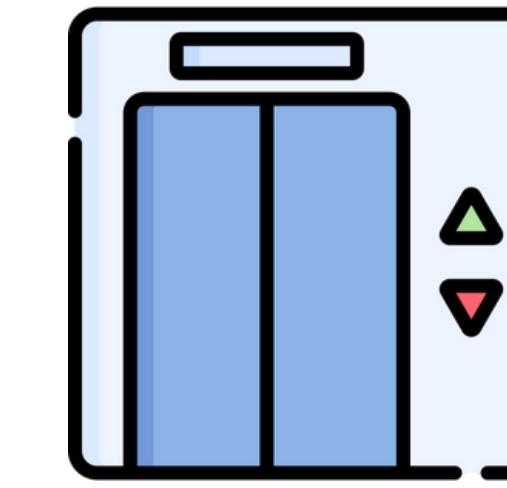
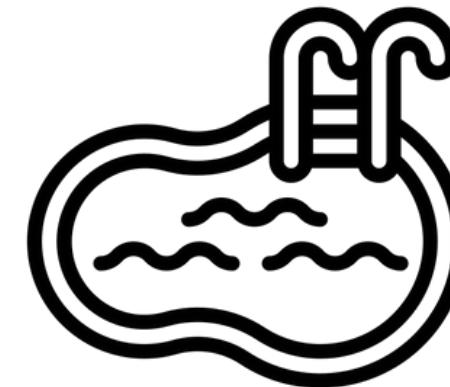
PREDICCIÓN

MADRID



# Hipótesis

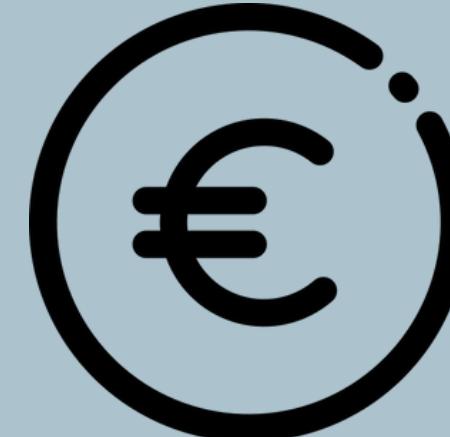
Las comodidades en una vivienda, incluyendo características como **ascensor, aire acondicionado, calefacción, estacionamiento, balcón, piscina o terraza**, tienen un impacto considerable en el precio de venta.



O1

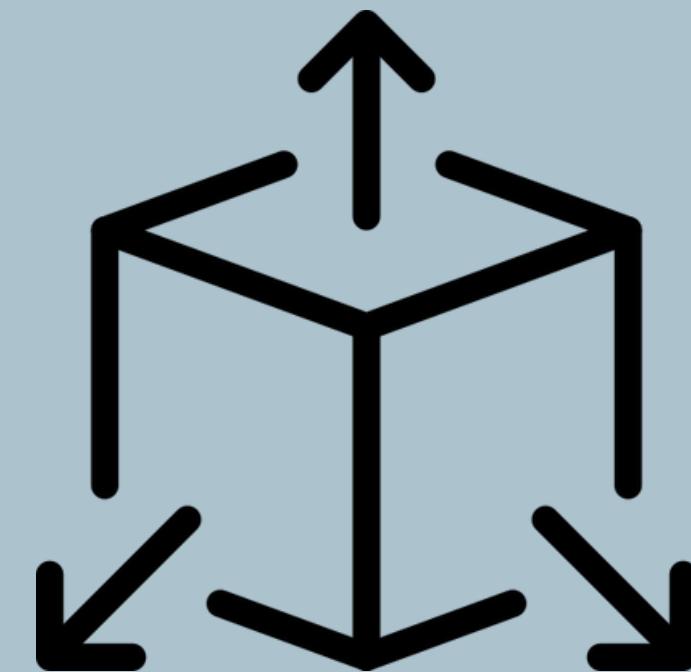
E  
D  
A

Variable dependiente

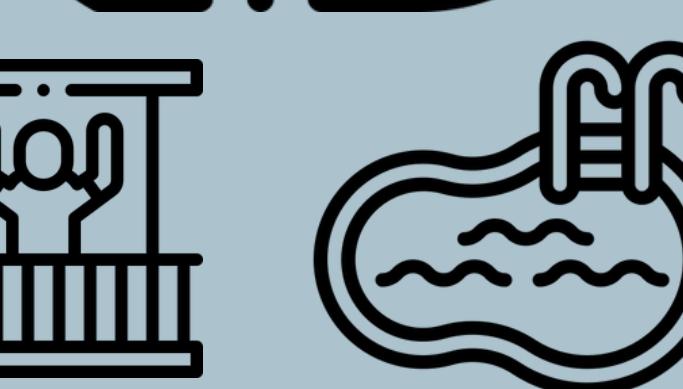
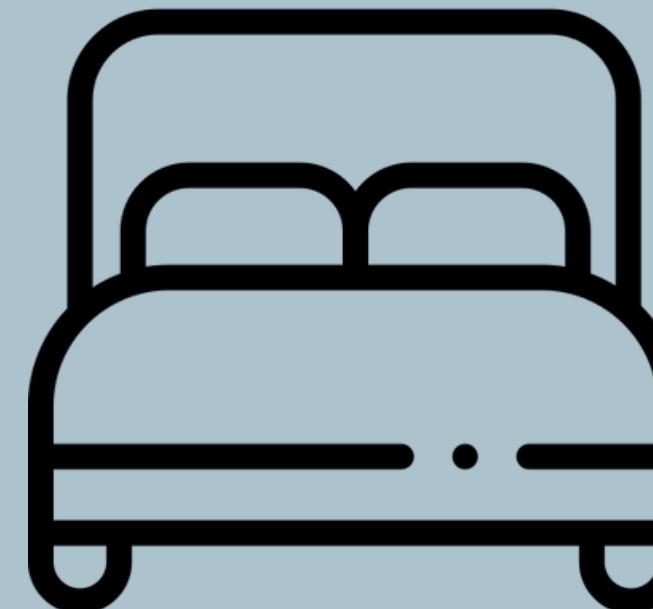


## Variables independientes

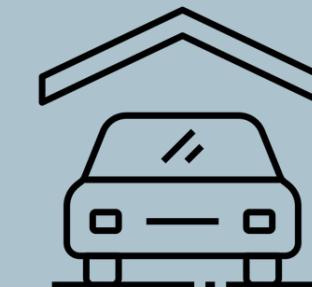
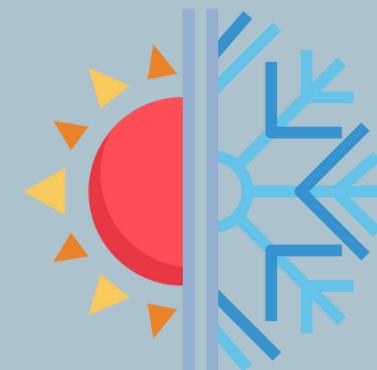
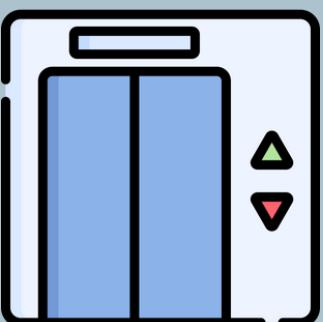
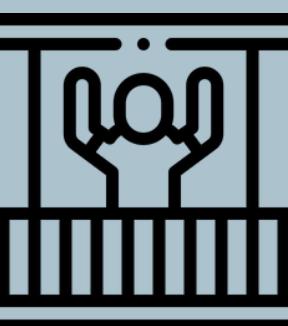
Superficie



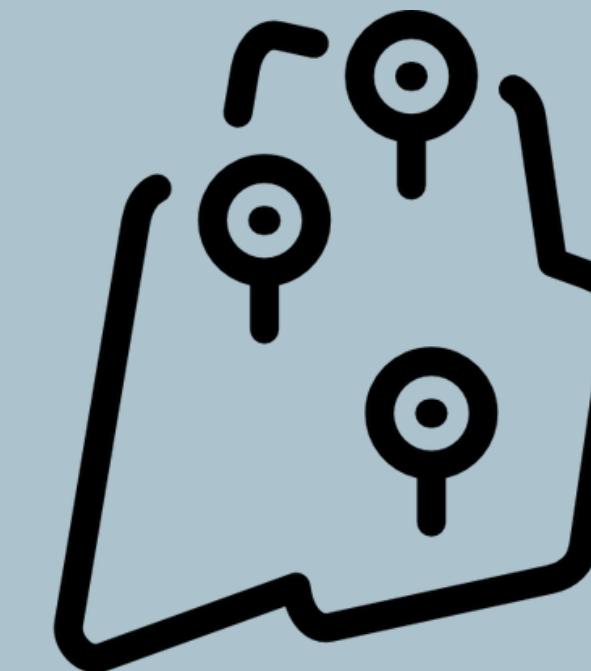
Habitaciones



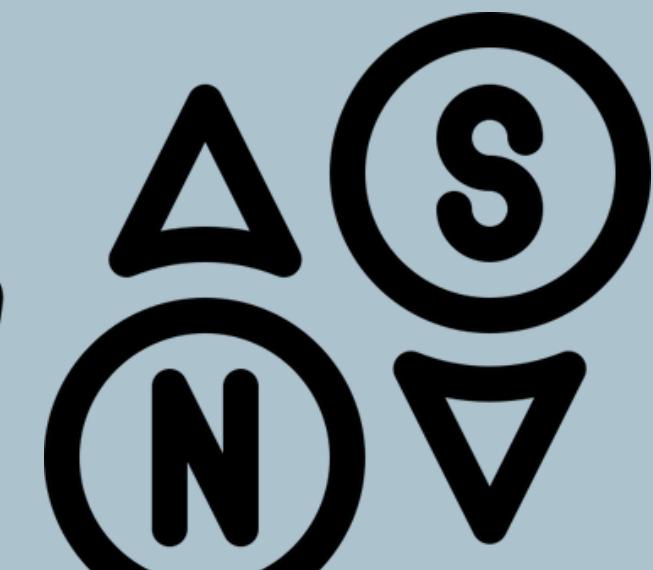
Baños



Código Postal

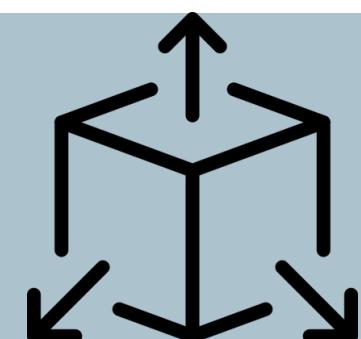
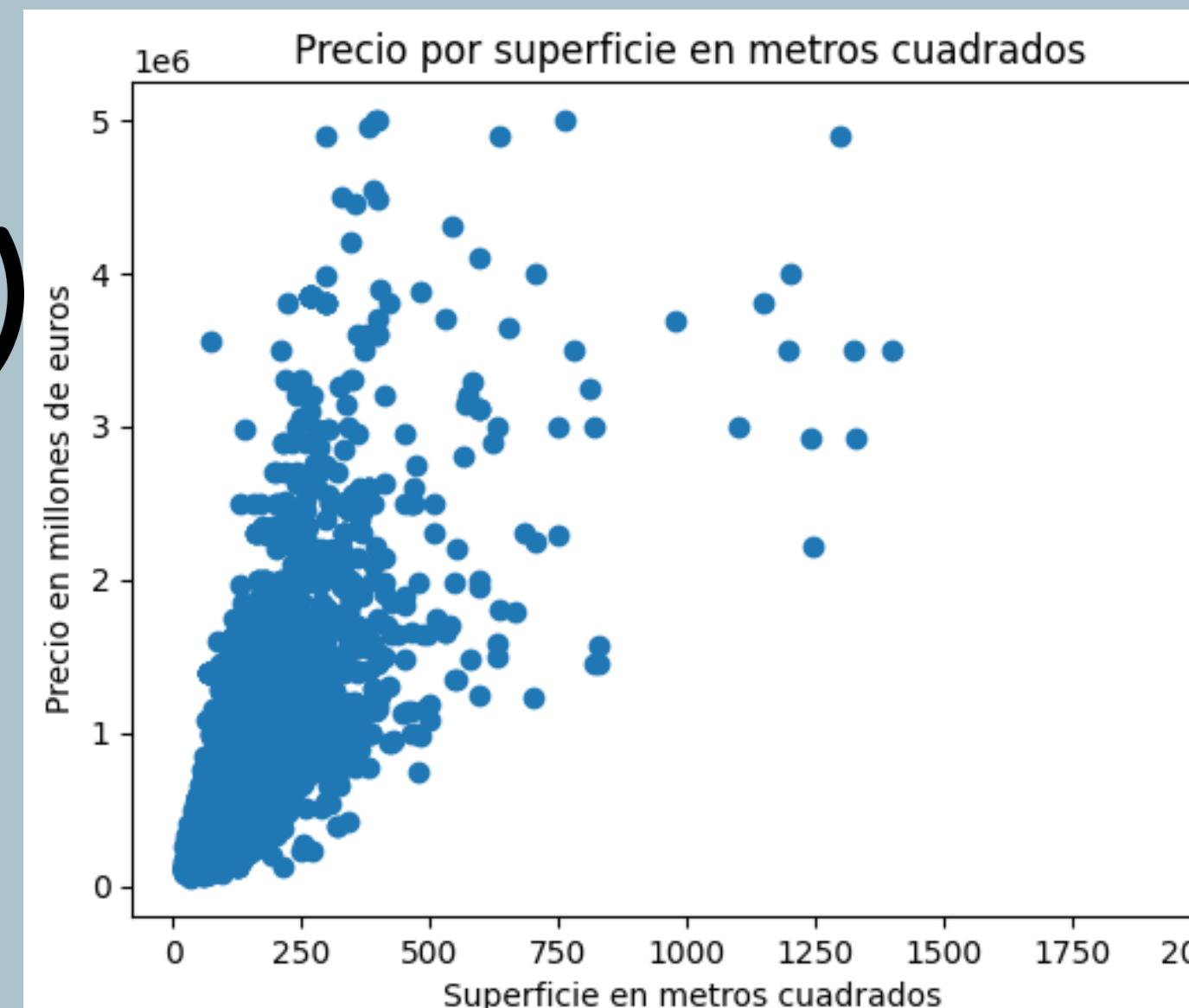
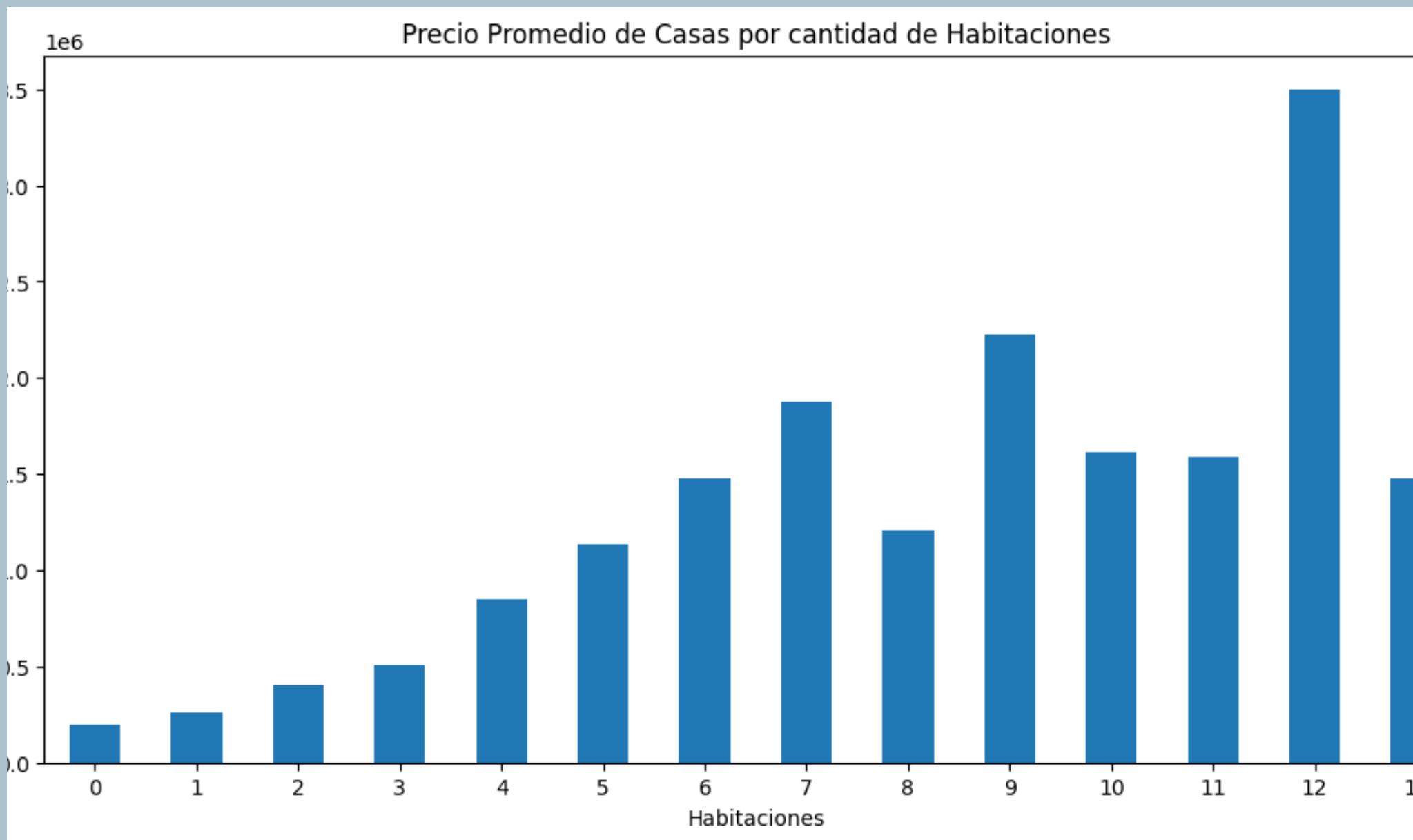


Latitud



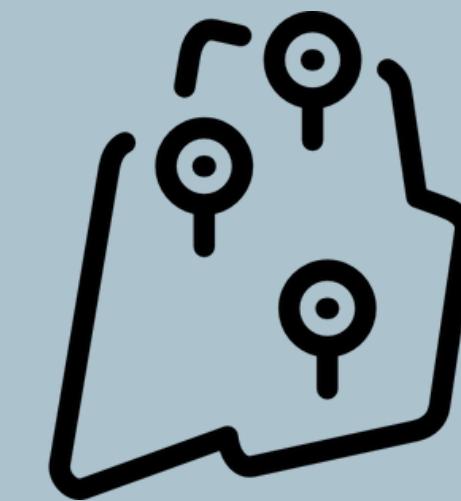
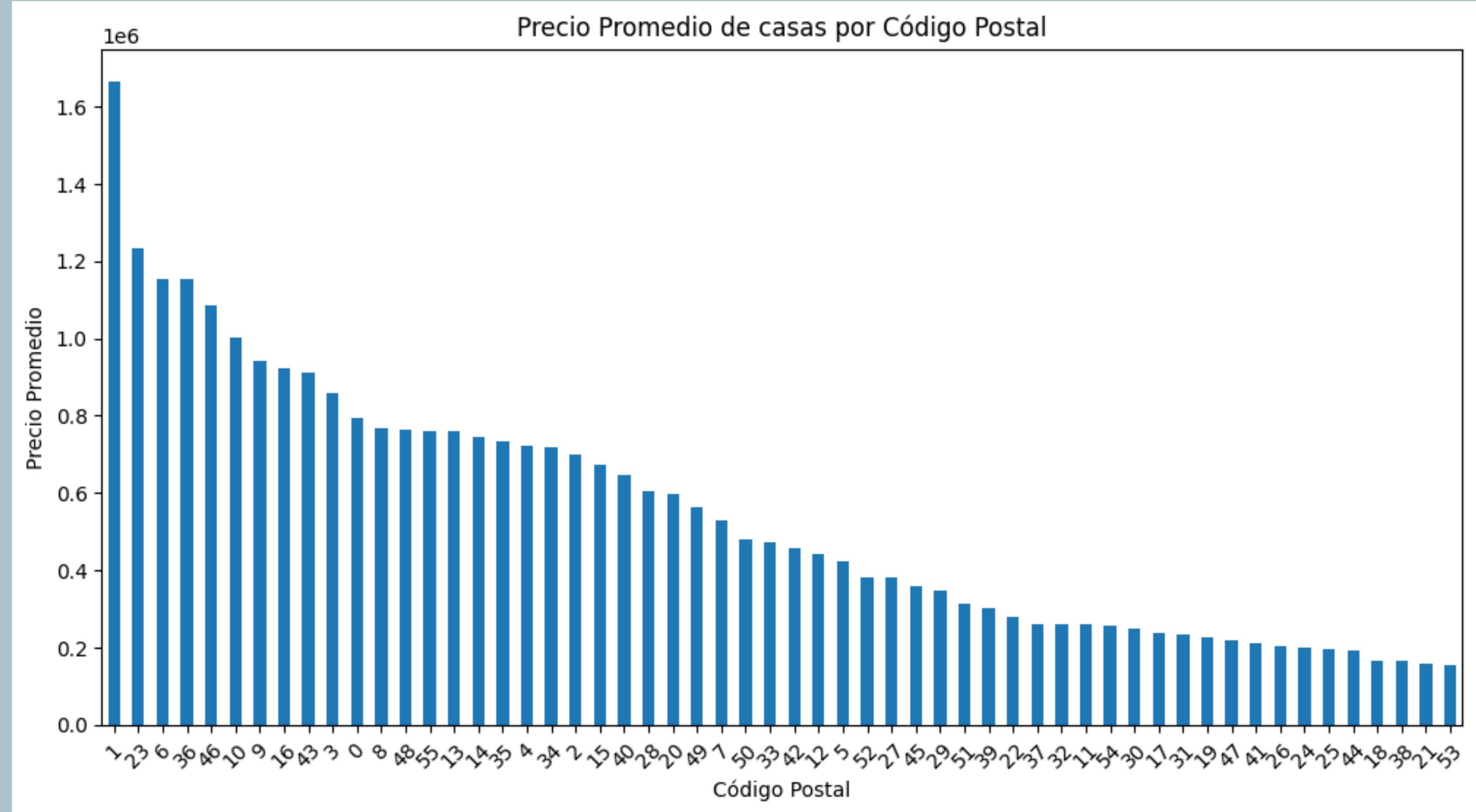
O1

E  
D  
A



O1

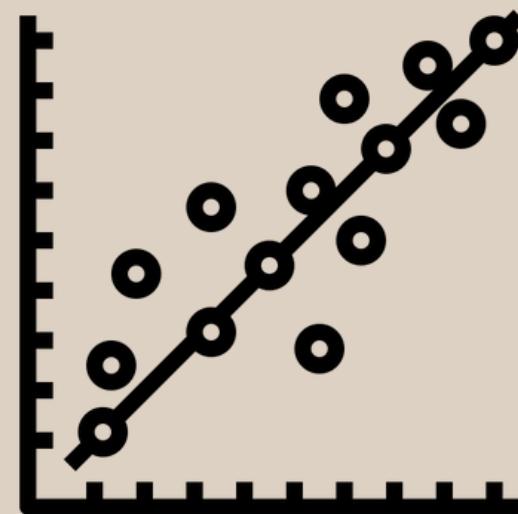
E  
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# ENTRENAMIENTO

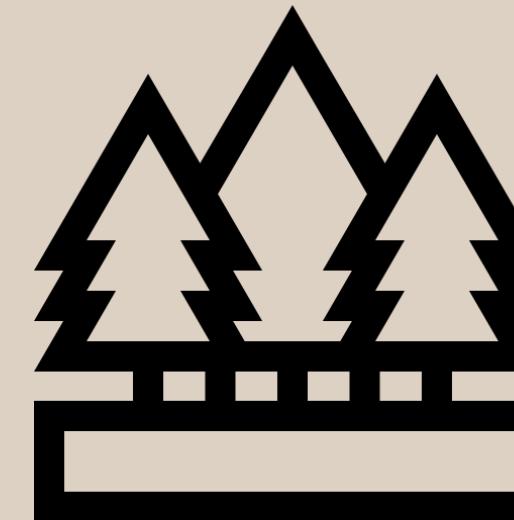
## Modelos utilizados

Regresión Lineal

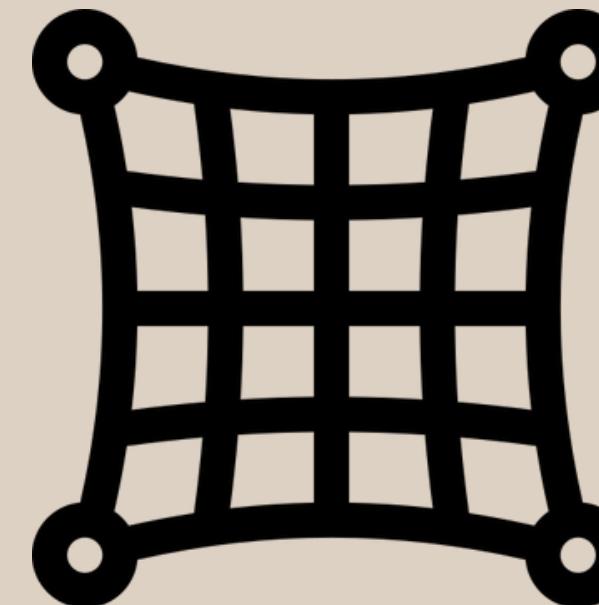


Ridge    Lasso

Random Forest



Grid Search



## Técnicas

**Train\_Test\_Split**

**Standard Scaler**

**Pipeline**

# VALIDACIÓN



## Random Forest

**R2\_score RandomForest 88%**

**MAE RandomForest 824.89,58**

**MSE RandomForest 32387450573.0439**

**MAPE RandomForest 15%**

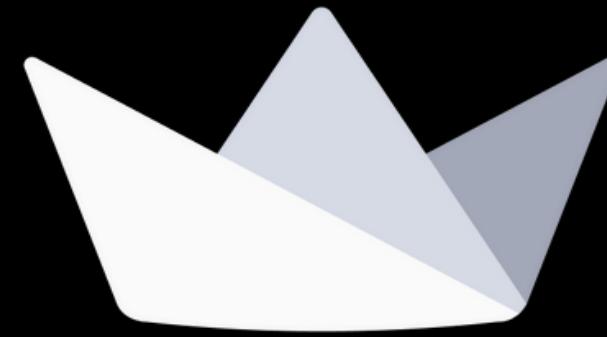
**Random Forest Normalizado**  
**R2\_score RandomForest\_Scal 0.8876**  
**MAE RandomForest\_Scal 83080.309**  
**MSE RandomForest\_Scal 32691094521.42**  
**MAPE RandomForest\_Scal 15.4111**



**n\_estimators=100,  
criterion='squared\_error',**

03

## PREDICCIÓN



# Streamlit

PREDICTOR DE PRECIOS DE VIVIENDAS EN MADRID

# PROXIMAMENTE

**Agregar locación en mapa a la predicción**

**Valores Shapley**

**Nueva recolección de data**

**Predecir en toda España**

# PREGUNTAS?

**MUCHAS GRACIAS!**