Polynomial Regression and Support Vector Regression Models

The dataset I chose to work with today includes data on house sales. It includes an id, date sold, price, bedrooms, bathrooms, sqft_living, sqft_lot, floors, waterfront rating, view rating, condition, grade, sqft_above, sqft_basement, yr_build, yr_renovated, zip code, latitude, longitude, sqft_living15, and sqft_lot15

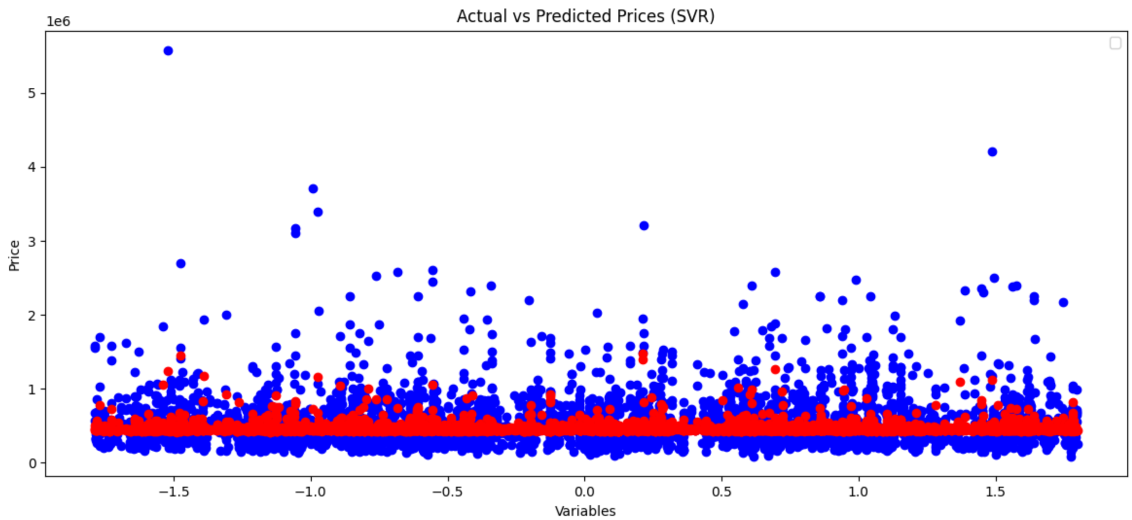
Polynomial Regression

Lot size in sqft (thousands) vs Price (millions)

The R-Squared value is: 0.8054268622440597
The Mean Squared Error value is: 23139467569.734367
The Root Mean Squared Error value is: 152116.6248959474
The Normalize Root Mean Squared Error value is: 2.7753443695666373
The Mean Absolute Error value is: 20.4121778077540

Predicted value:
I predicted that a house with a lot of 10000 sq ft will cost 4123456.64827 dollars.

Support Vector Regression



Variables (Every other variable mentioned in input variables) vs Price (in millions)
Unfortunately, due to the high dimensionality of my dataset, directly plotting the decision function in the input space was not possible. An SVG model was used!

The R-Squared value is: 0.17661599376143244
The Mean Squared Error value is: 97920338488.3154
The Root Mean Squared Error value is: 312922.2563006911
The Normalize Root Mean Squared Error value is: 5.709218323311277
The Mean Absolute Error value is: 41.526242622602446

Predicted value:
I predicted that a house with an id of 9270200160, a year sold of 2014/10/28, 3 bedrooms, 3 bathrooms,sqft_living of 1570, sqft_lottage of 2280, 2 floors, 0 waterfront rating, 0 view rating, 3 condition rating, 7 grade,1570 sqft above ,0 square feet basement, 1922 build date, 0 renovations, zip code of 98119, 47.6413 latitude, -122.364 longitude,1580 sqft_living15,2640 sqft_lot15 would have a price of 686345.234 dollars.