House Sales in King County Regression

Seattle: May 2014-May 2015 →

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AGENDA

INTRODUCTION

5-STEP PLAN

INSIGHTS

MODEL COMPARISON

APP DEVELOPMENT

INTRODUCTION

Regression

Regression models are used to predict the price of a house in seatatle based on the data from May 2014 and 2015

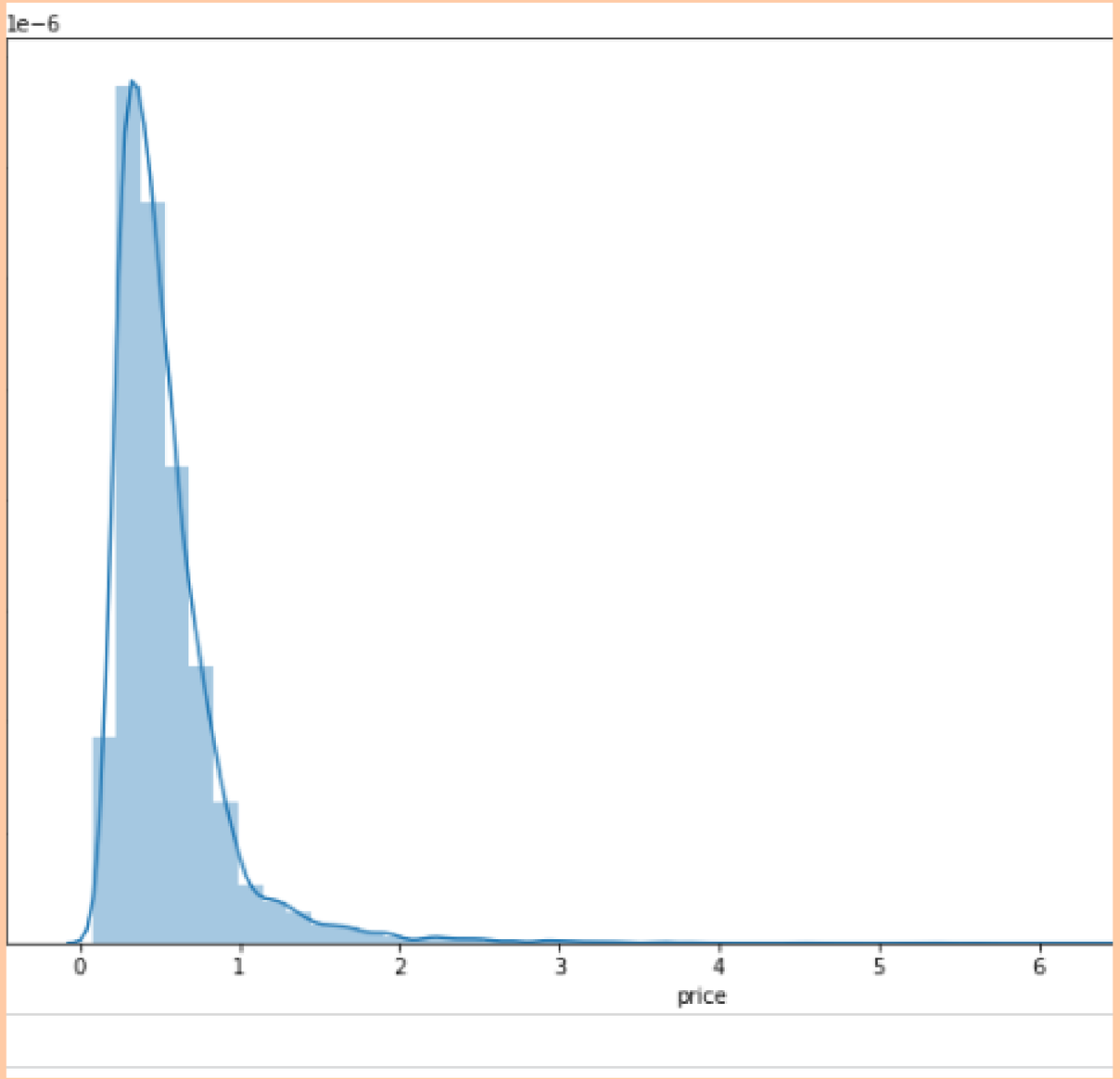
5-Step Plan

01	**AIM**	To make our evaluations based on every basic parameter that is considered while determining price
02	**importing Libraries**	pandas,numpy,sklearn, seaborn,matplotlib
03	**Data Cleaning**	Null values,noise and outliers were removed.
04	MODELS	Linear Regression,Random Forest Regressor,XGBoost,Polynomia Refression(degree 2,3)l
05	Web App	Pycharm:index.html & main.py

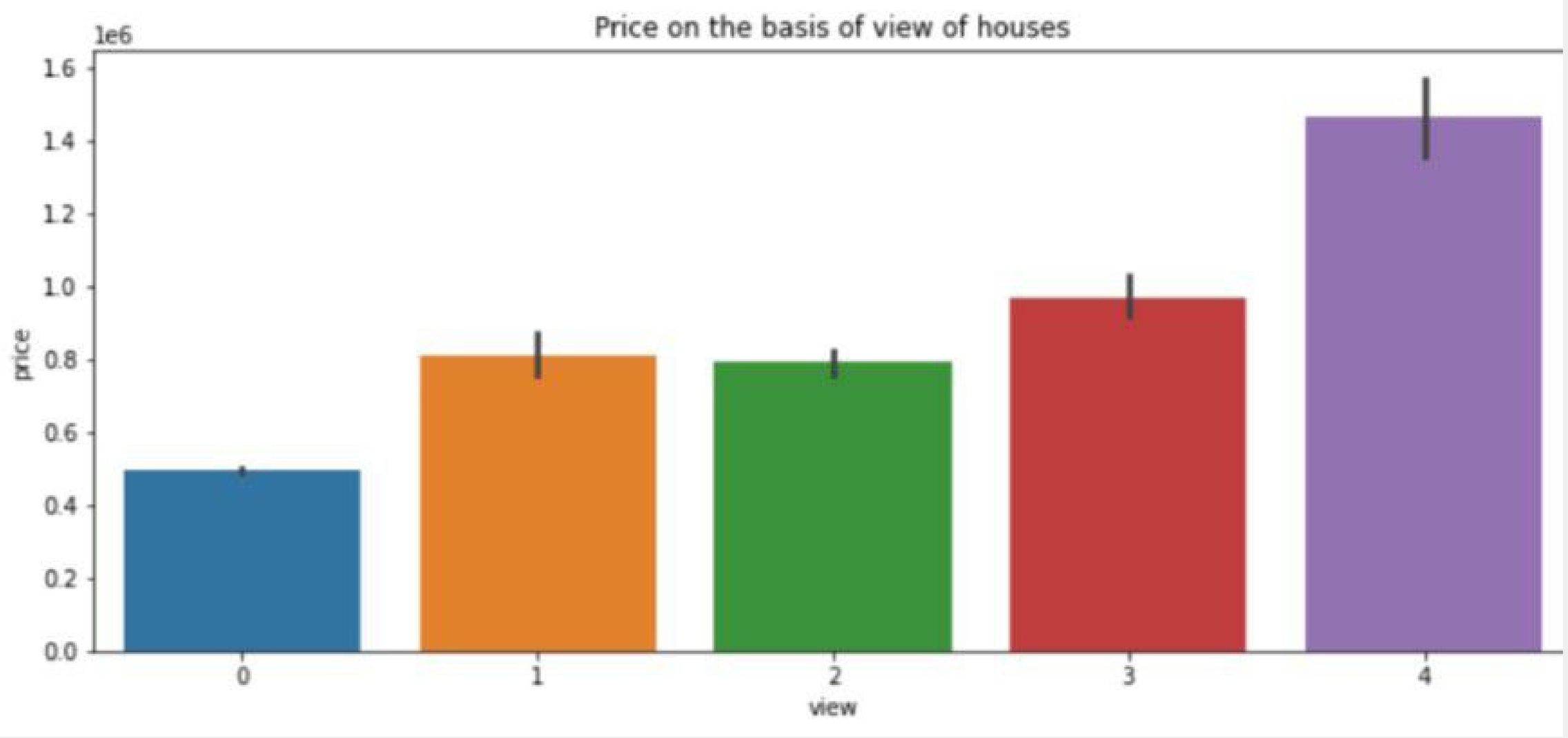
Insights

- UNIVARIATE ANALYSIS
- BIVARIATE ANALYSIS
- CHISQUARE ANALYSIS
- MULTICOLLINEARITY

UNIVARIATE ANALYSIS



Most Properties sold are of near 1 million Prices in Seattle



PRICE VS VIEW

THE PROPERTY PRICE IS DIRECTLY RELATED TO THE VIEW IN SEATTLE

CHI SQUARE ANALYSIS

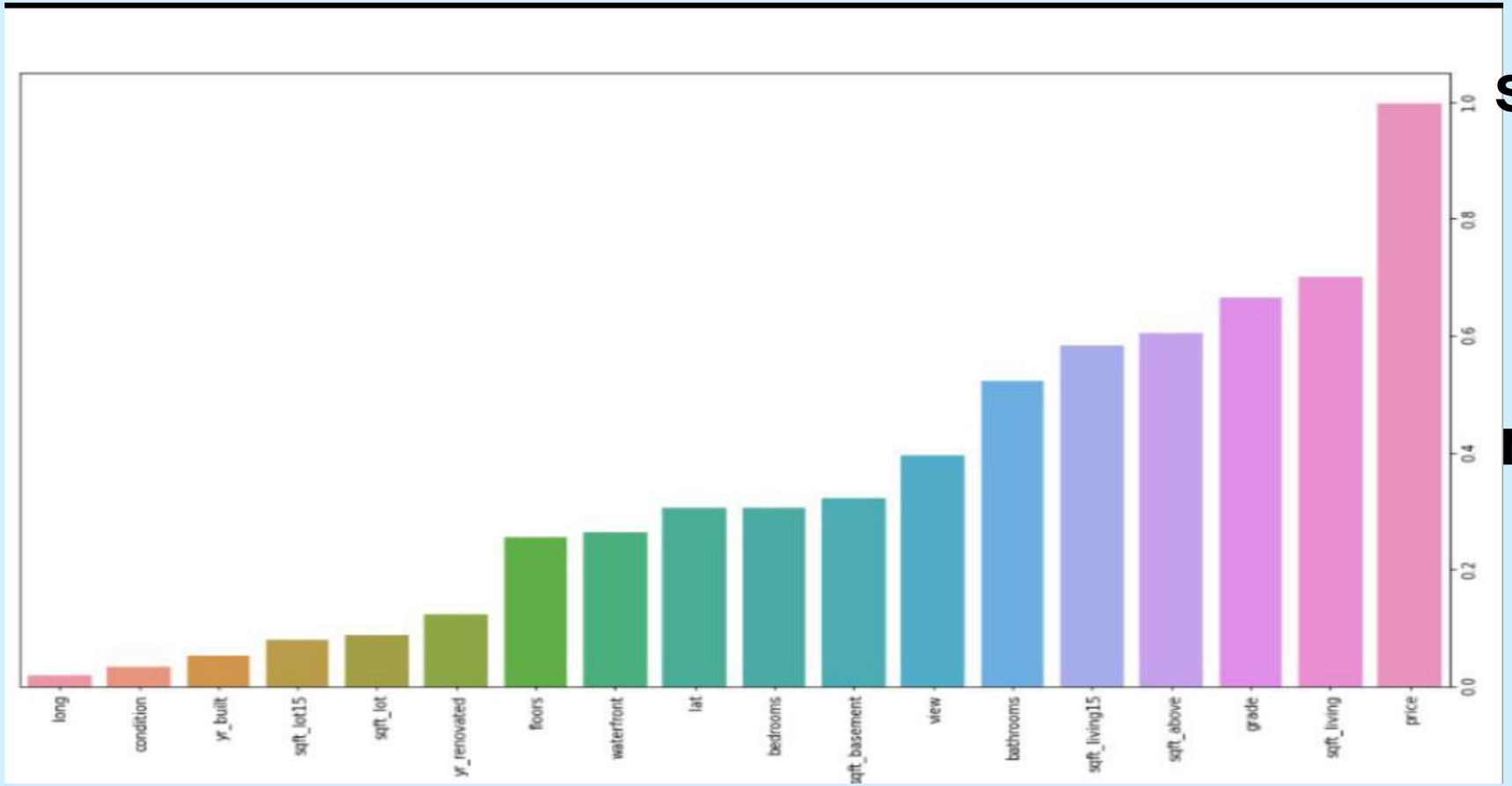
View-Waterfront

7575.56

Condition-grade

2225.62

MULTICOLLINEARITY



sqft_above,sqft_basement and sqft_living shows some level of multicollinearity..But we can't drop them as the are highly correlated with the Price.

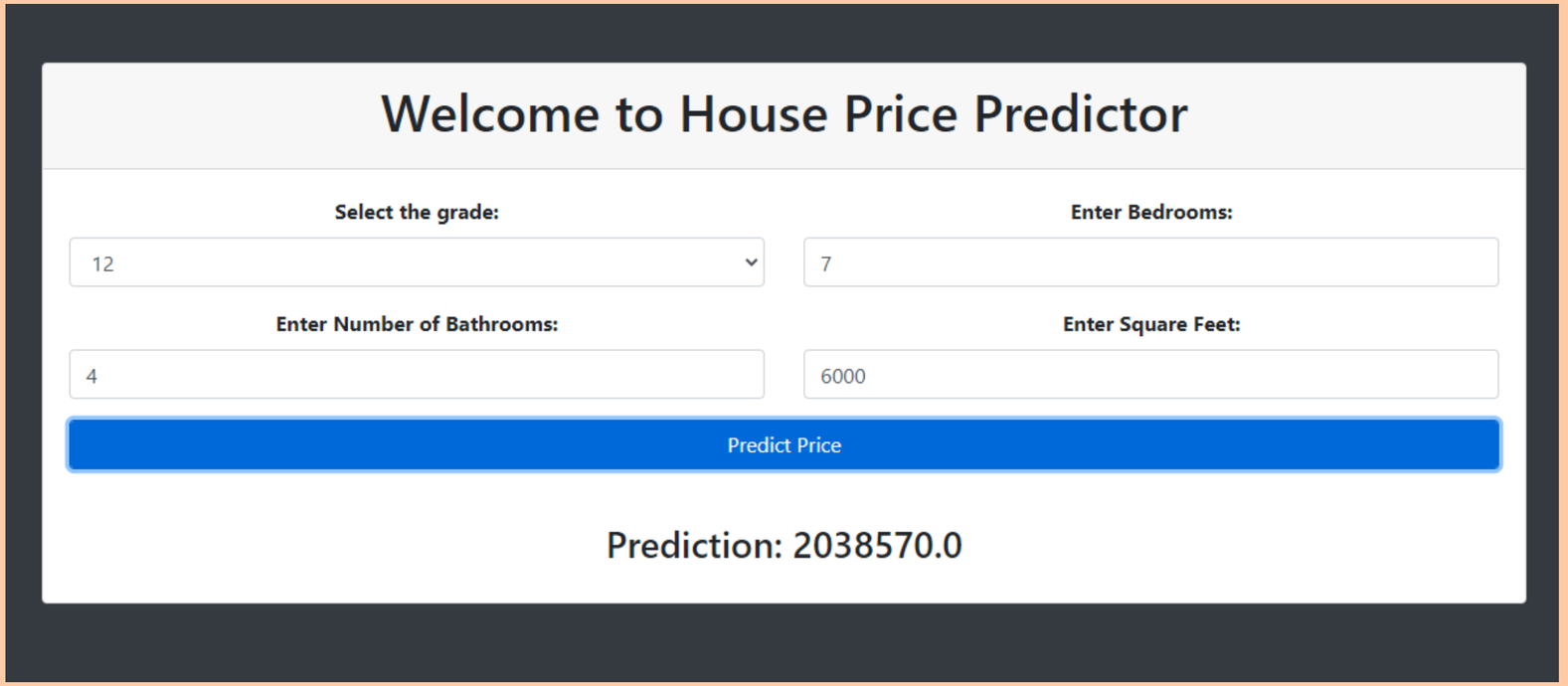
MODEL COMPARISON

- RANDOM FOREST
- XGBOOST
- LINEAR REGRESSION
- SVR
- POLYNOMIIAL REGRESSION

	Model	R-Squared Score
1	Random Forest	85.01171
2	XGBoost	82.67395
4	Polynomial Regression(D-2)	75.75459
5	Polynomial Regression(D-3)	75.75459
0	Linear Regression	65.48679
3	SVR	-4.79359

Random Forest Regressor:Highest R2_Score

House Price Predictor



Random Forest Regressor Model was used to create a webapp which can predict the House price based on Parameters:
grade,sqft,bedrooms and bathrooms in Seattle.

Thanks for listening!