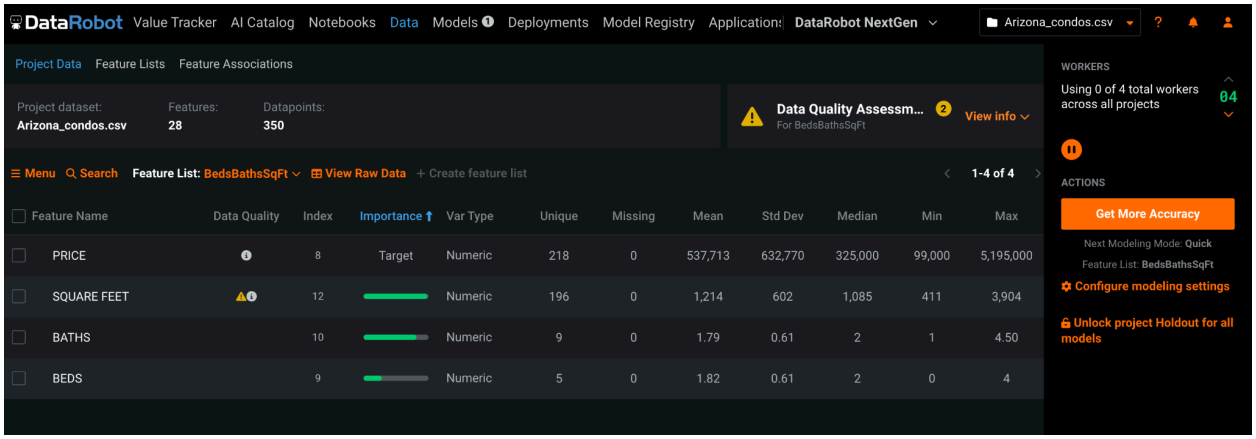
Business Case.

The real estate industry is marked by substantial financial transactions, involving a considerable amount of monetary exchange within the field. This dynamic sector encompasses a diverse range of stakeholders, including investors, developers, buyers, sellers, and real estate professionals. The models available in this domain offer valuable insights and tools that can prove beneficial to various participants in the real estate ecosystem.

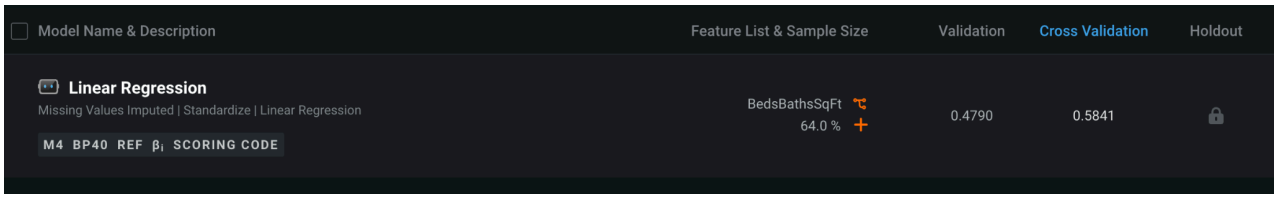
Different participants may have different requirements for the model performance. Acceptable model performance will probably be > R2=0.9.

Data for condos listed in Phoenix, Arizona was taken from RedFin. Total 350 listings were downloaded.

Q1. Data Preprocessing.



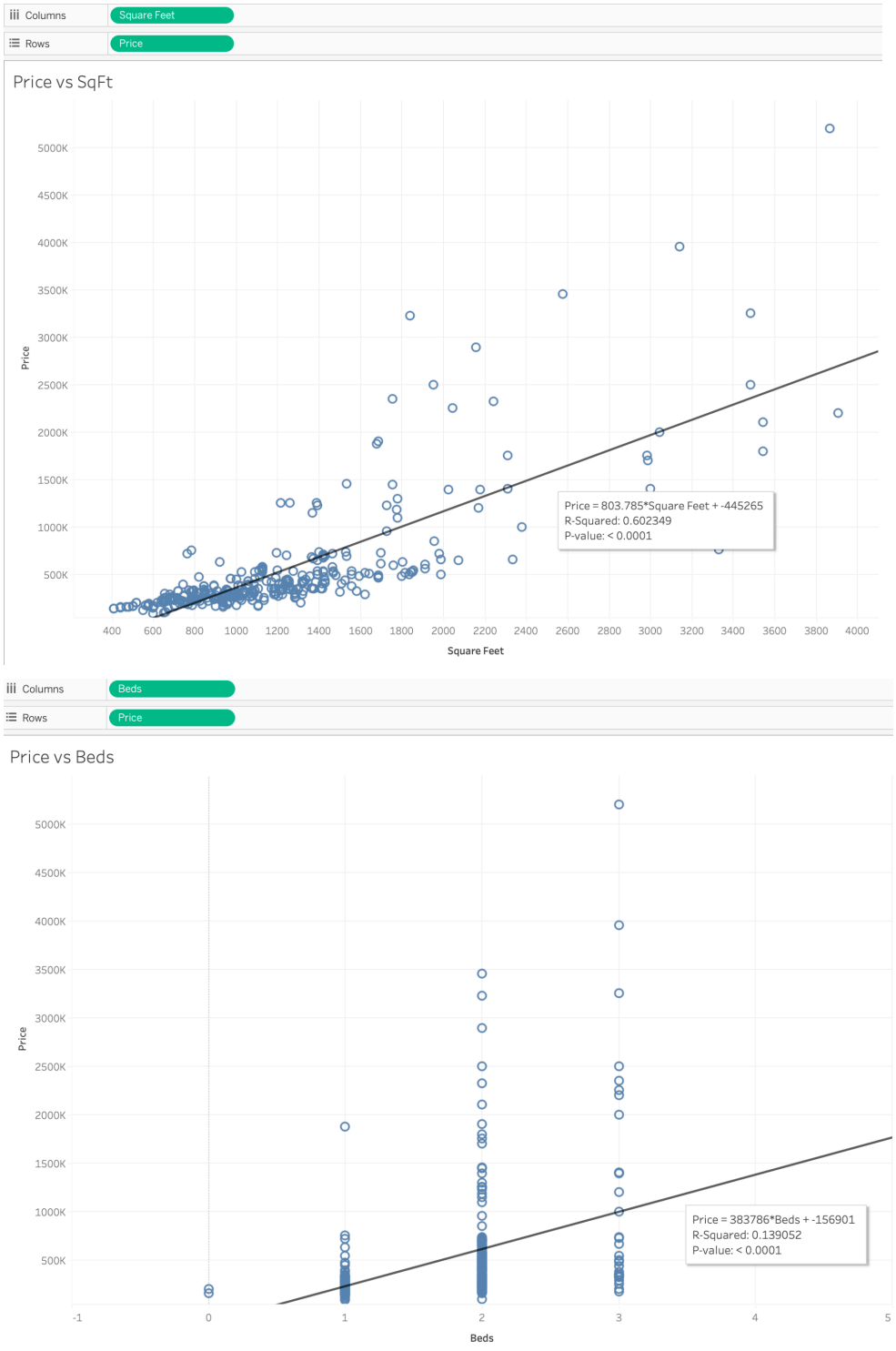
Q2. Multiple Regression Model.

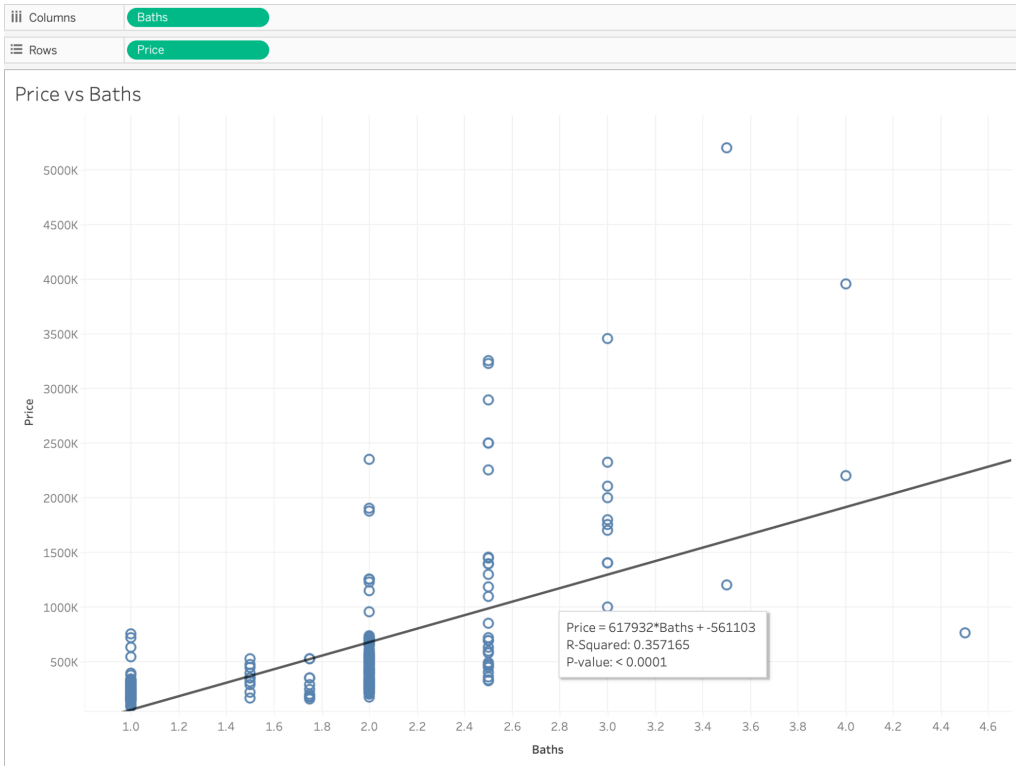


R2	0.58
MAE	$2,14,173
RMSE	$3,77,204
MAPE	42%

R2 has an unacceptable performance as for this context the acceptable R2 is 0.9 or greater . The values of MAE and RMSE are also very high. Also, MAPE here is 42%, which for this case is very high.

Q3. Simple linear regression models.





R2 values for simple linear regressions.

SqFt	0.60
Beds	0.14
Baths	0.36

Q4. Best predictor.

Based on R2, SqFt is the single best predictor of asking prices in Phoenix, Arizona for condo markets.