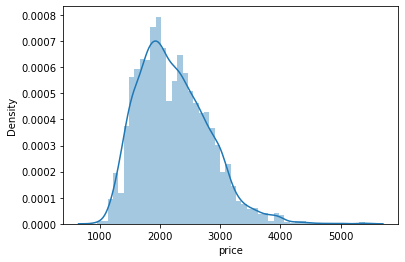
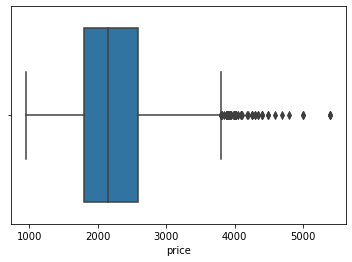
1. Variables:

- Numerical variable: price, hd, screen, ads, trend

- Categorical variable: cd, multi, premium, screen, ram

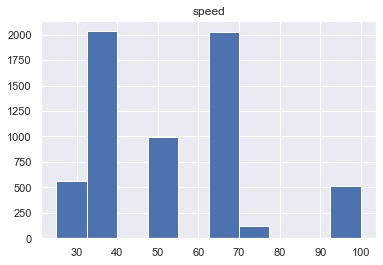
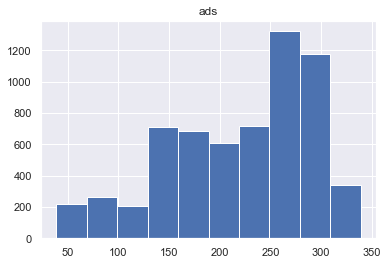
2. Distribution of Price

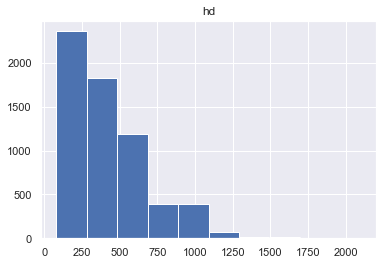
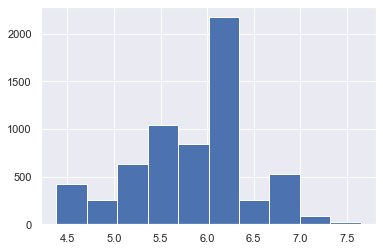




Distribution slightly skewed to the right, with outliers

3. Distribution of numerical variables





‘HD’ is normalized by applying log transformation.

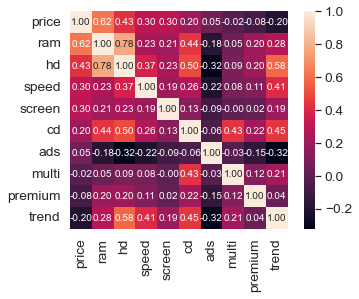
4. Check for multicollinearity between variables based on heatmap:

Price is highly correlated with RAM (0.62) and HD (0.43)

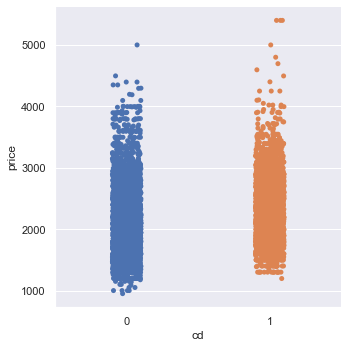
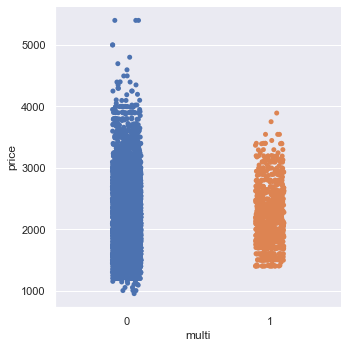
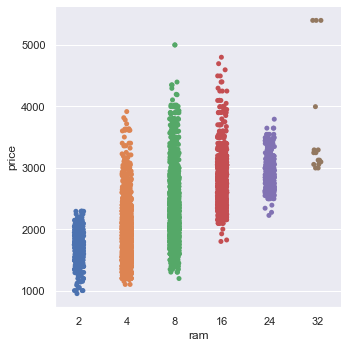
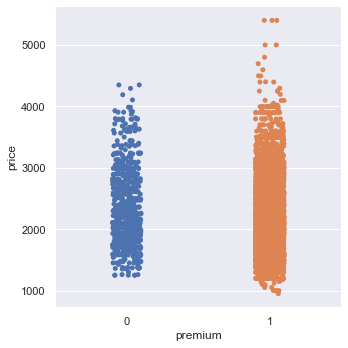
Correlation between HD and RAM is 0.78

Correlation between CD and RAM is 0.44

Correlation between HD and TREND is 0.58



5. Compare Price across categorical variables

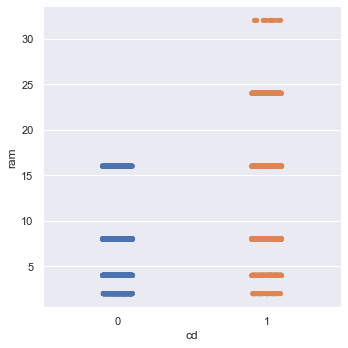
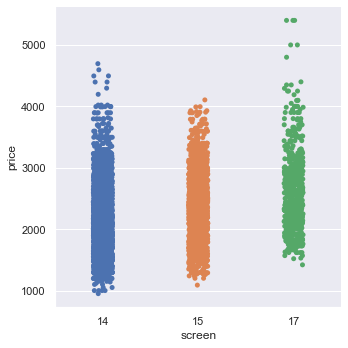
 

i) Multi and Premium show high correlation with Price.

ii) Computer with no Multi have higher Price

iii) Computer with Premium have higher Price.

iv) Computer with higher RAM have higher Price.



Computer with CD have higher RAM, so higher RAM will cause higher Price. Larger Screen have higher Price.

6. VIF:

Variables VIF

0 price 4.455684

1 speed 1.778995

2 hd 4.747040

3 ram 3.949940

4 screen 1.245590

5 cd 1.871565

6 multi 1.098532

7 premium 1.377403

8 ads 1.215409

9 trend 4.030482

Based on observation, correlation between independent variables are low. All features do have correlation with dependent variable (Price).

R2 (before log transformation on HD) = 0.776

**R2 (after log transformation on HD) = 0.795**

Predict sales of the computer

test\_rmse

266.75616660065594

train\_rmse

260.7478820331692

🡪 Prediction

Index Price

5318 2973.8653326619446

3517 2705.915641169562

1209 3257.357390327898

6048 1981.1814353151385

2526 2042.2098094337998

5987 1432.7915007331267

5771 1293.5515103618197

3235 1546.5005359715417

2882 2577.748427598229

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4561 3017.5176485308134

6167 2218.348148112743

5947 1755.63375323042

4557 2015.6495542602247

6123 2476.971389106335

6225 3018.575147465851

1429 2179.905046983868

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1898 1429.6947443286476

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1759 2331.62153469029

3855 1949.319147031106

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692 2419.2326159701392

224 2470.436484447914

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610 3152.569578837614

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