

Linear Regression

1. Simple Linear Regression between Price and Sq. feet

→ Coefficient is found to be 277, which tells us that the average value of a house increases by \$277 on average for each additional one square foot of size

→ RMSE is found to be \$272,082 and the R^2 value is 0.050.

2. Simple Linear regression between Price and Bedrooms

→ Coefficient is found to be 126,220, which tells us that the average value of a house increases by \$126,220 on average for each additional bedroom.

→ Intercept is 115,856, indicates that, for houses within the range of the bedroom observed, \$115,856 is the portion of the house price not explained by the number of bedrooms.

→ RMSE is \$371,822 and the R^2 value is 0.07.

3. Simple linear Regression between Price and Bathrooms

→ Coefficient is found to be 250,995, which tells us that the average value of a house increases by \$250,995 on average for each additional bathroom.

→ Intercept is 9112, indicates that, for houses within the range of bedrooms observed, \$9,112 is the portion of the house price not explained by the number of bathrooms.

→ RMSE is \$334,102 and the R^2 value is 0.25.

4. Simple Linear Regression between Price and Floor

→ Coefficient is found to be 179992, which tells us that the average value of a house increases by \$179,992 on average for each additional floor.

→ Intercept is 272454, indicates that, for houses within the range of bedroom observed, \$272,454 is the portion of the house price not explained by number of floors.

→ RMSE is \$376,773 and the R^2 value is 0.04.

Multiple Linear Regression

Multiple Linear Regression between Price and Sq. Feet, Bedrooms, Bathroom, Floor.

→ RMSE value is \$270,832.

→ R^2 value is 0.51.

Logistic Regression

Bank Personal Loan Modelling dataset:

When a bank wants to offer a loan, the following factors are highly significant:

- Annual Income of the customer.
- Family Size of the customer.
- Education Level-
 1. Undergrad
 2. Graduate
 3. Advanced/Professional
- Does the customer have a Certificate of Deposit (CD) account with the bank?
- Does the customer use internet banking facilities?
- Does the customer use a credit card issued by Universal Bank?

The following factors are also significant to some extent:

→ Avg. spending on credit cards per month.

→ Does the customer have a securities account with the bank?