The background is a dark blue-grey color. It is decorated with various geometric shapes in orange and white. There are circles of different sizes, some with dotted patterns inside. There are hexagons, some solid orange and some outlined in white. There are also triangles and lines. Some shapes are partially cut off by the edges of the frame. The overall style is modern and minimalist.

Ames Housing Analysis

Rajashree Choudhary
-DSB, 122

01. About the Project

02. Major Requirements

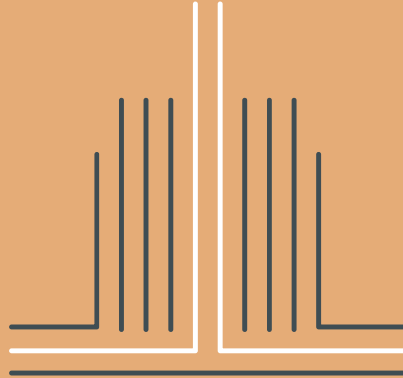
03. Project Goals

04. EDA

05. Findings

06. Recommendation





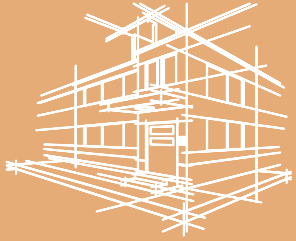
Problem statement

.....

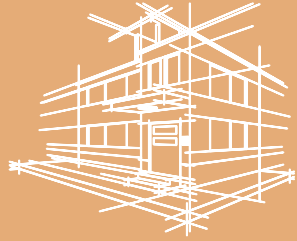
- Determine the best model for predicting Sale Price for houses in Ames.
- What are the features on which house price depends on.



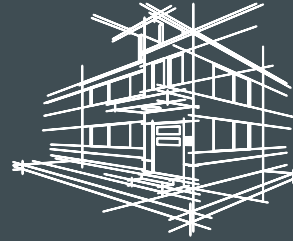
Work Flow



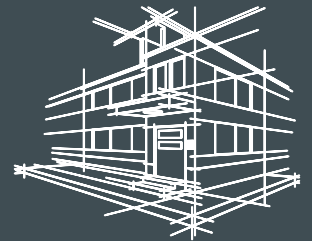
**Cleaning and
Preprocessing**



**Exploratory
Data Analysis**



**Modelling &
Evaluation**



Recommendation

Code Snippets

```
na_counts = train.isna().sum()
na_counts[na_counts > 0]
```

Lot Frontage	330
Alley	1911
Mas Vnr Type	1240
Mas Vnr Area	22
Bsmt Qual	55
Bsmt Cond	55
Bsmt Exposure	58
BsmtFin Type 1	55
BsmtFin SF 1	1
BsmtFin Type 2	56
BsmtFin SF 2	1
Bsmt Unf SF	1

Calculating counts for
na values in the train
datasets column

```
import numpy as np, pandas as pd
import scipy.stats as stats
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.feature_selection import SelectKBest
from sklearn.metrics import r2_score
```

Imports

```
# fit lasso using training set
model_lasso = lasso.fit(X_train,y_train)
# training score
print("Training set score: {:.2f}".format(model_lasso.score(X_train,y_train)))
# testing score
print("Test set score: {:.2f}".format(model_lasso.score(X_test,y_test)))
print("Number of features used: {}".format(model_lasso.coef_.nonzero()[0].size))
```

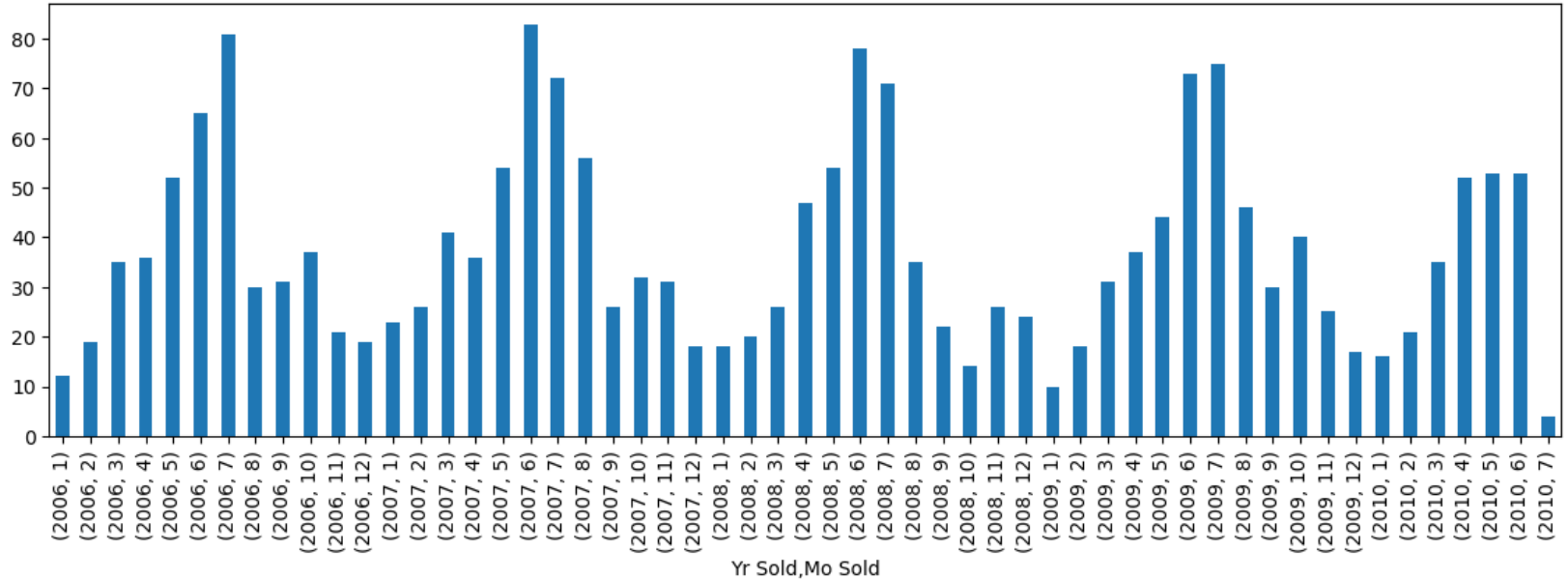
Training set score: 0.79
Test set score: 0.63
Number of features used: 11

Finding score of
Training, Testing and
No. of Feature used.

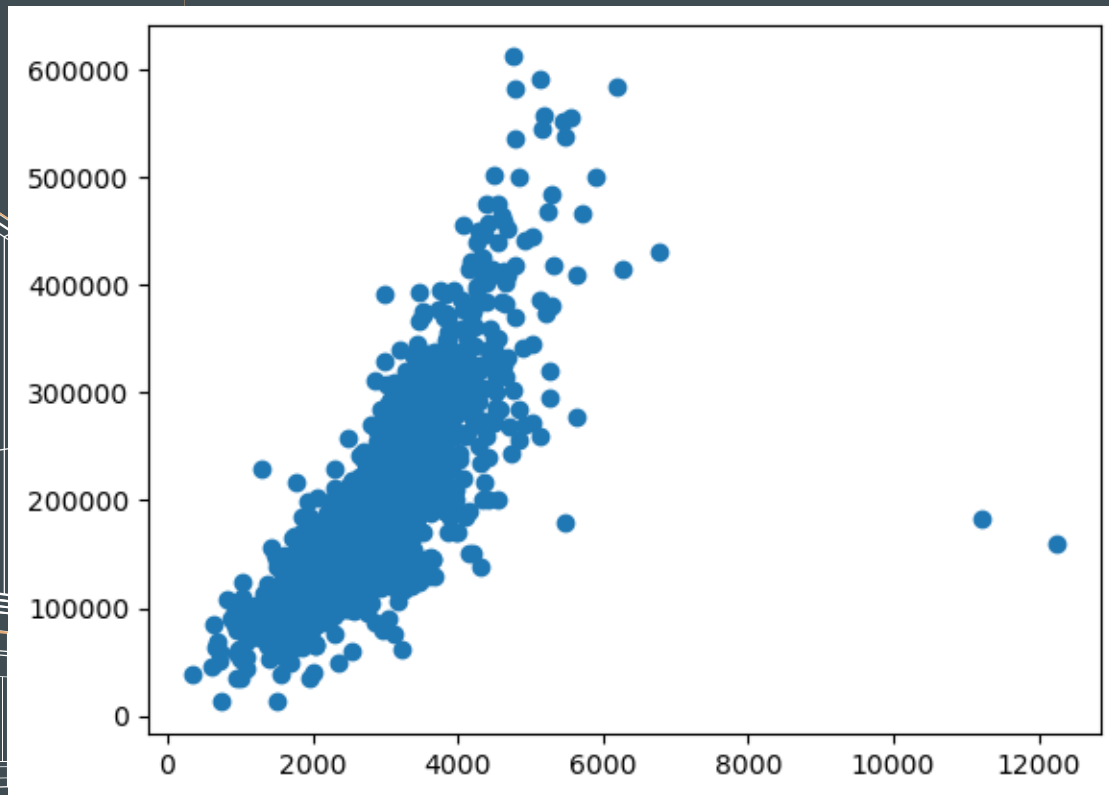
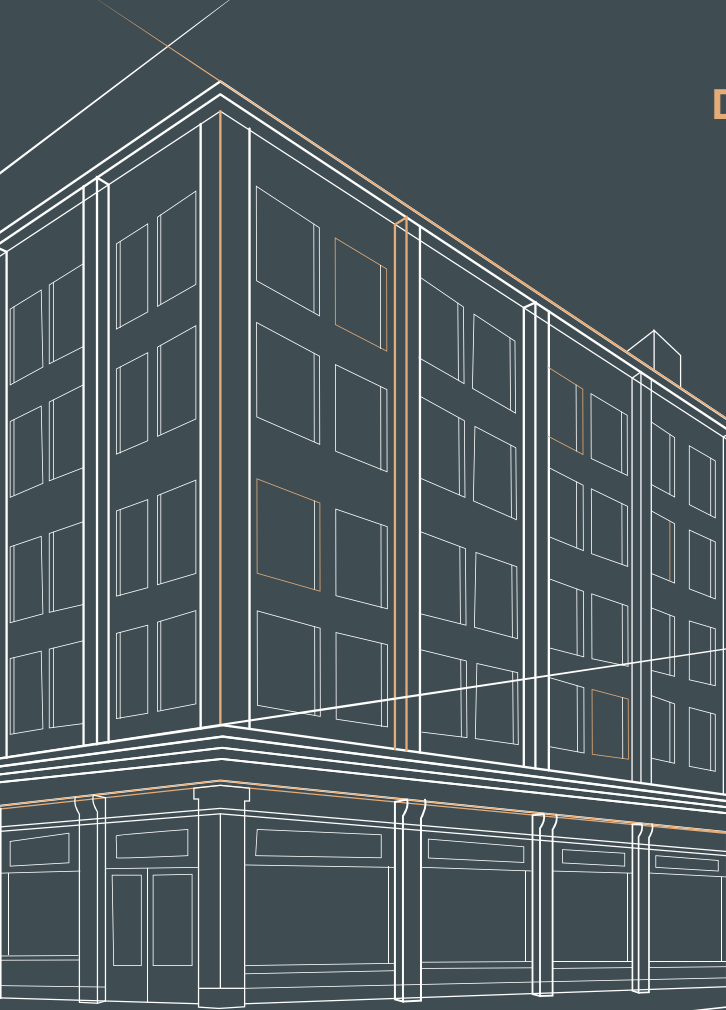


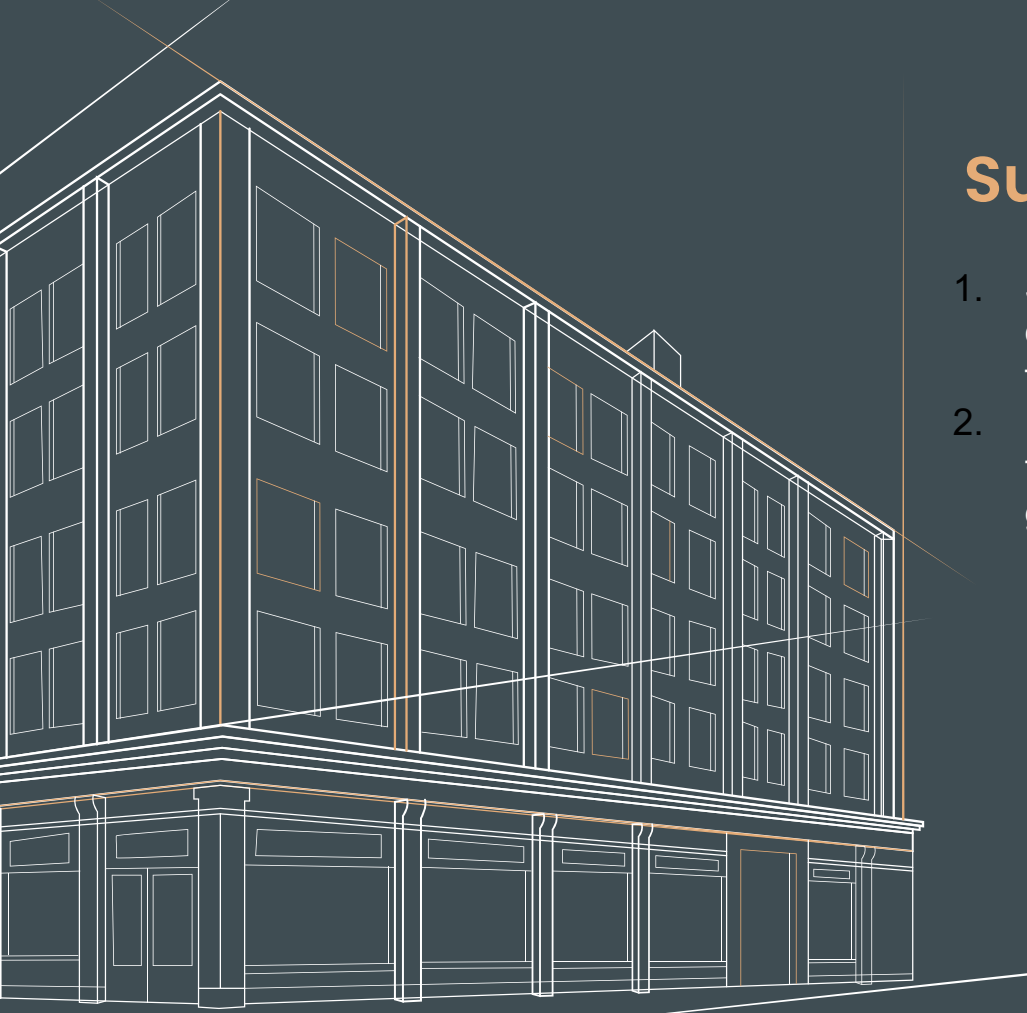
Houses sold / year

When where houses sold?



Does Total Square-feet of the house is important in Sale Price?





Summary of Findings

1. Square feet area, condition, age, and the location of the house are the most important determinant factors of sale price.
2. House buyers should invest in houses based on the location, total sq. feet of the house, lot area, garage, year built.

Recommendation

1. Renovate the house if it is in bad condition.
2. Build a garage or renovate old one if it is damaged.
3. If its in cold place, add fireplace.
4. Renovate Kitchen.

Thanks!

Do you have any questions?
crajshree1002@gmail.com



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