

HACKATHON TETLOW TIGERS

Members

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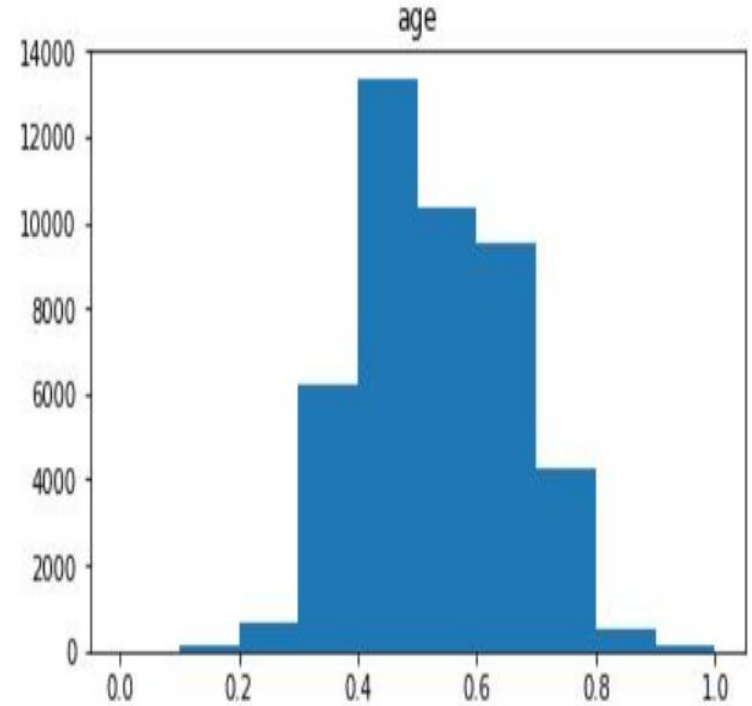
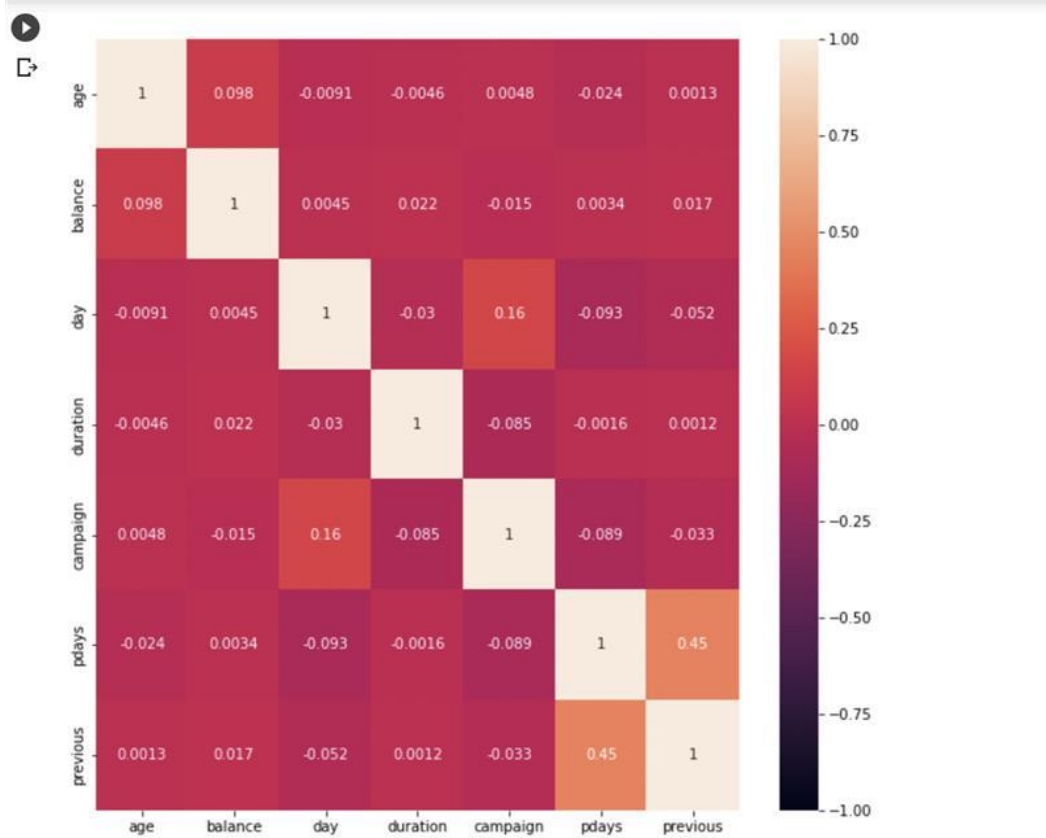
Aniruddha Tambe

Outline

- ❑ Data Preprocessing and Exploratory Data Analysis
- ❑ Data Visualization
- ❑ Machine Learning Concepts

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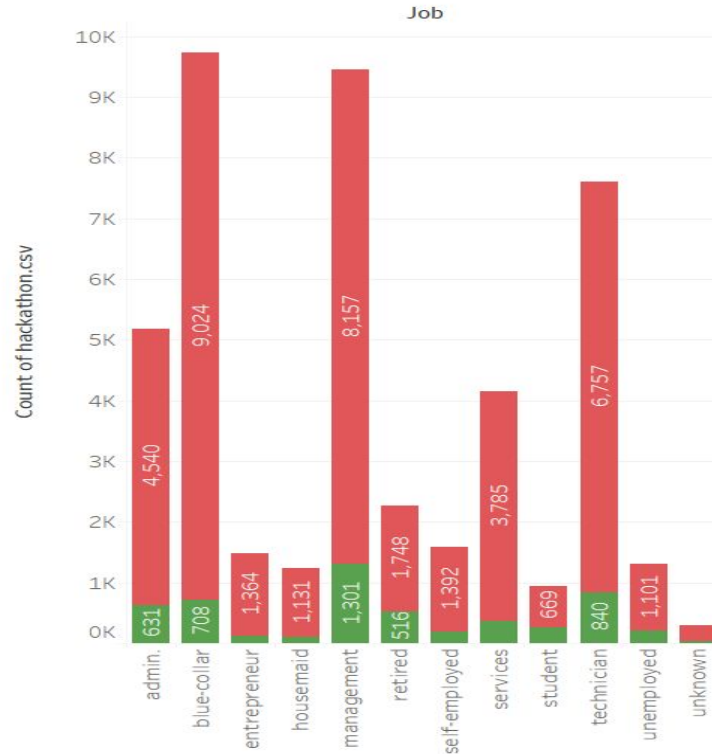
Data Preprocessing and Exploratory Data Analysis



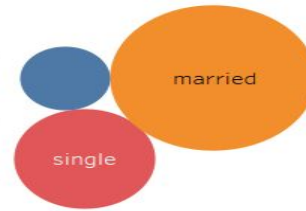
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Data Visualization

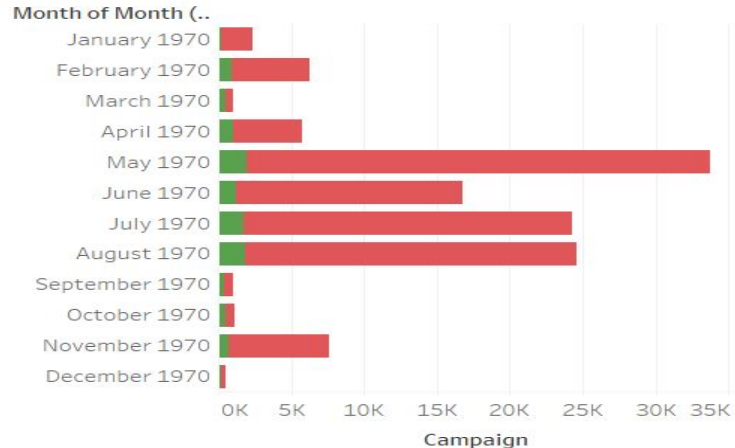
Count based on Job



Count based on marital status



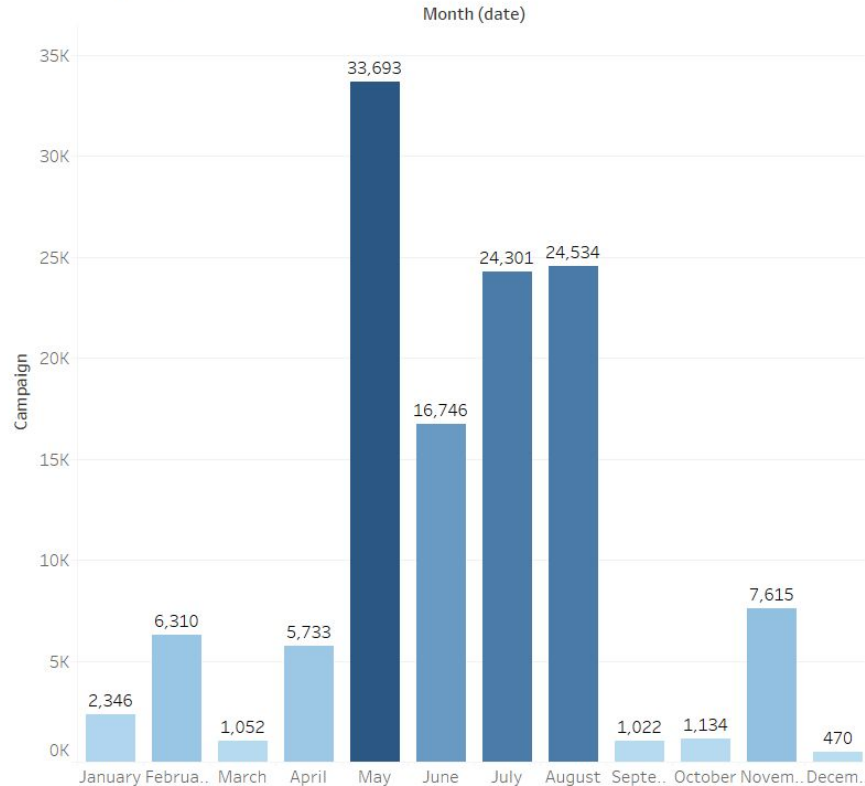
Campaign vs Duration of calls



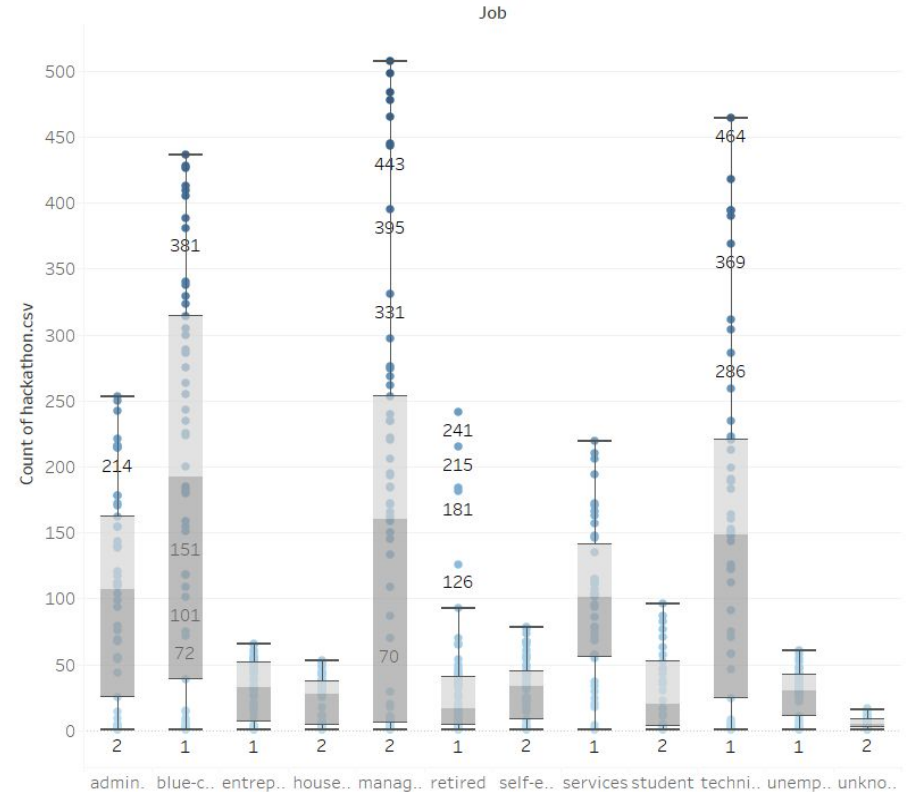
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Data Visualization

Total campaigns based on month



Distribution of age by occupation



Insights gained

1. More the duration of the call, higher the probability that customer will subscribe to term deposit.
2. Entrepreneur and Blue collar have high duration in calls and retired have less duration.
3. More number of management and self-employed have subscribed.
4. More number of campaigns in May to August.
5. Management and retired have highest balance.

Machine Learning Concepts



```
result_df = result_df.sort_values(by=['Accuracy Scores'], ascending=False)  
result_df
```



	Classifiers	Accuracy Scores
4	Grad Boosting	0.903119
0	Logistic Reg.	0.895184
5	Rand FC	0.893303
1	Support vector	0.883212
2	K- Nearest	0.881332
3	Decision Tree	0.850752

Machine Learning Concepts

```
cm = confusion_matrix(y_test, y_pred)
plt.figure(figsize = (8,8))
fig, ax = plt.subplots(1)
ax = sns.heatmap(cm, ax=ax, annot=True) #normalize='all'
plt.title('Confusion matrix')
plt.ylabel('True category')
plt.xlabel('Predicted category')
plt.show()
```

<Figure size 576x576 with 0 Axes>

