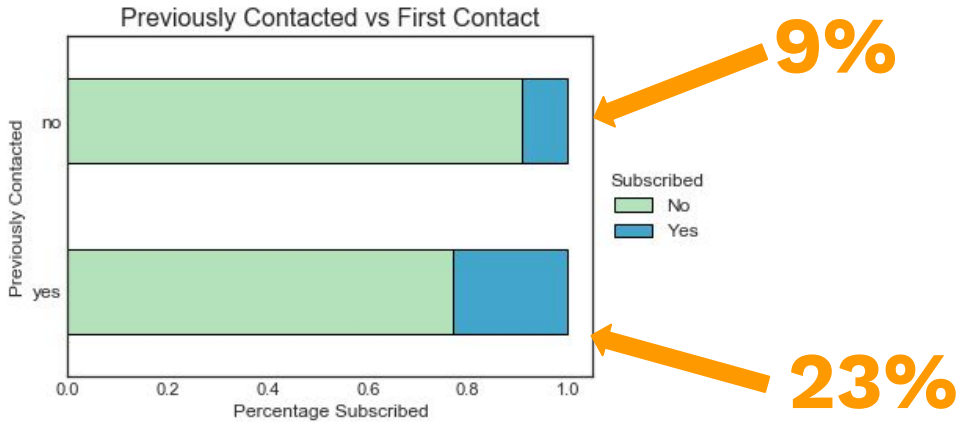
Predicting Subscribers

The Good, the Bad, and the Unknown

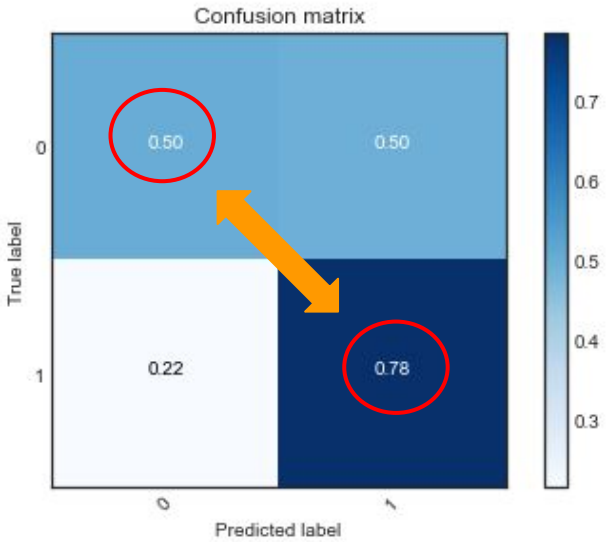
What we already know...



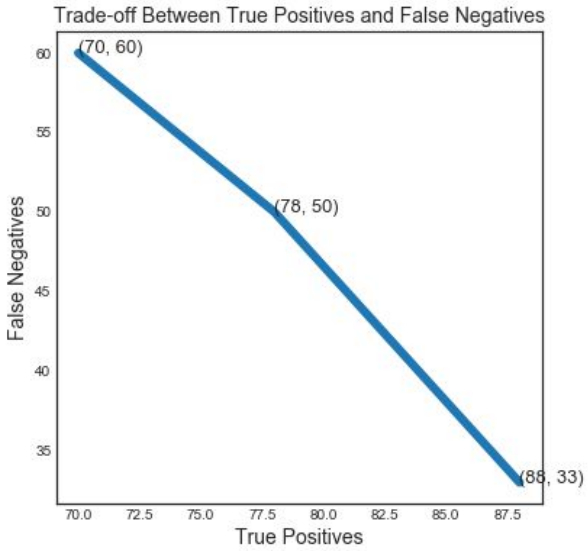
9%

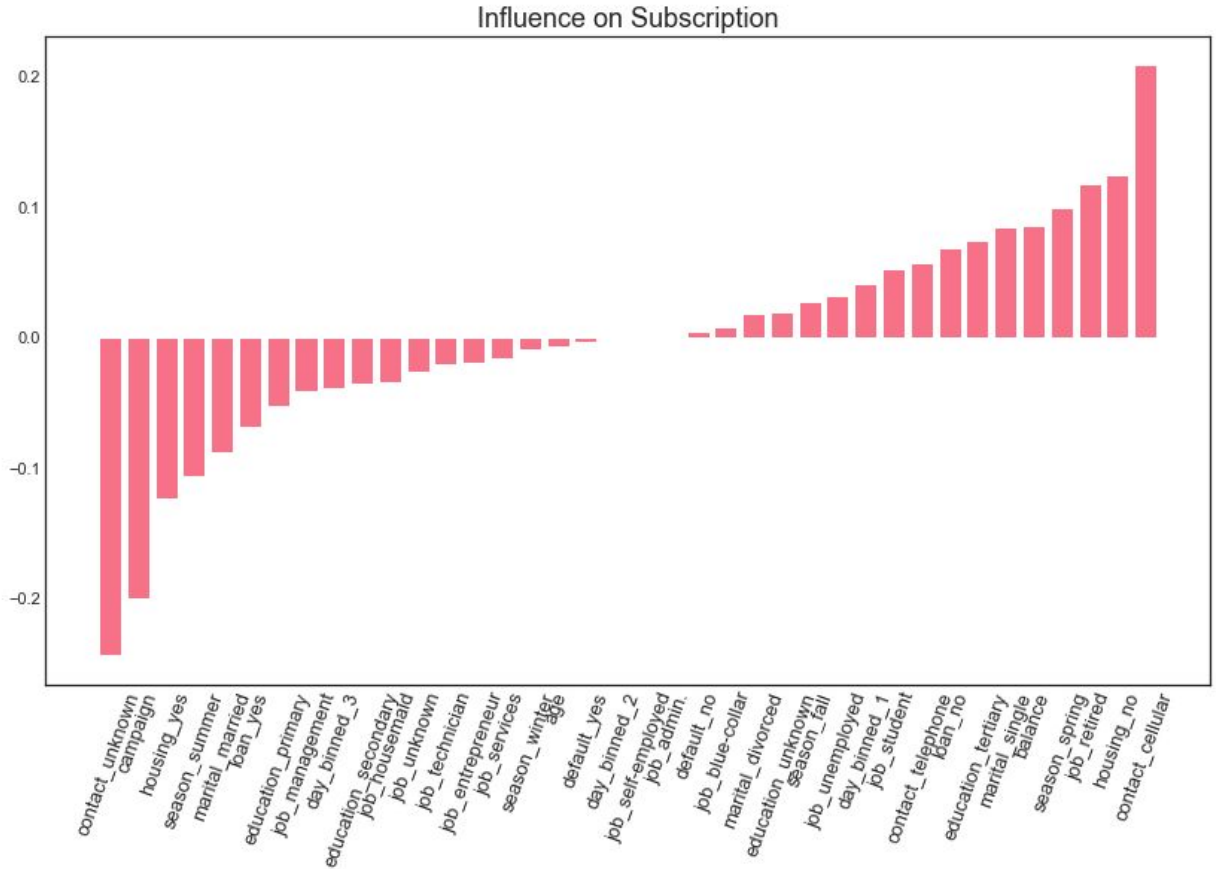
23%

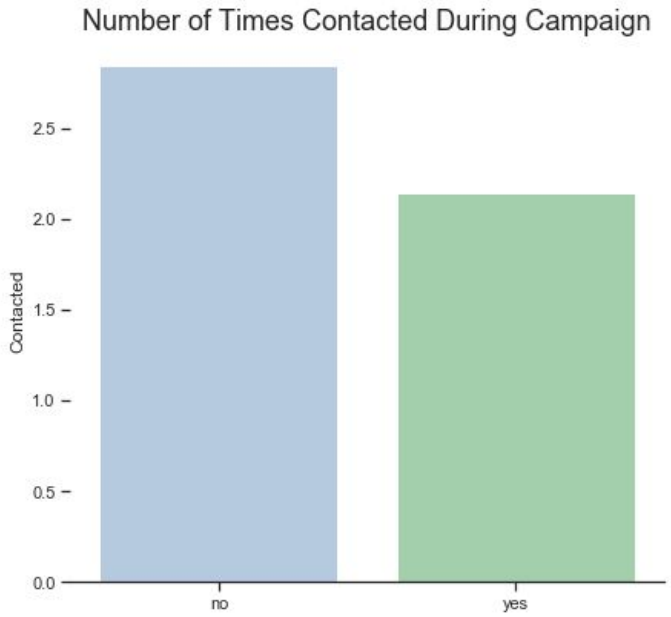
Can we predict who will subscribe?

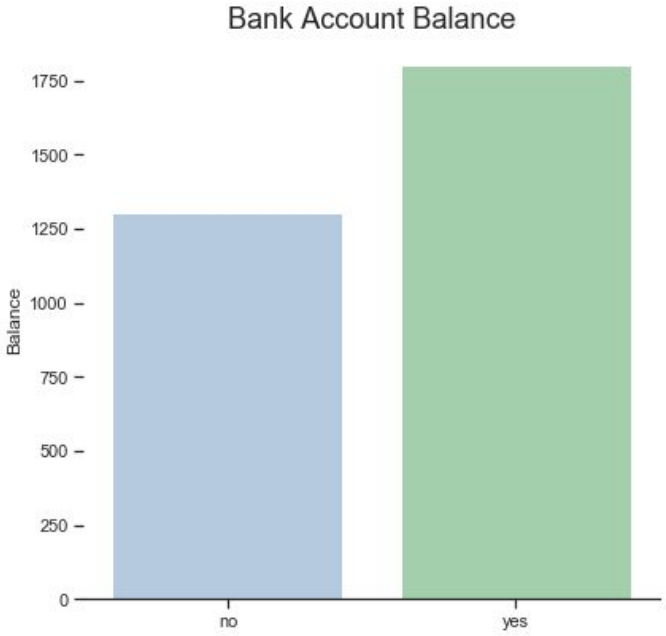


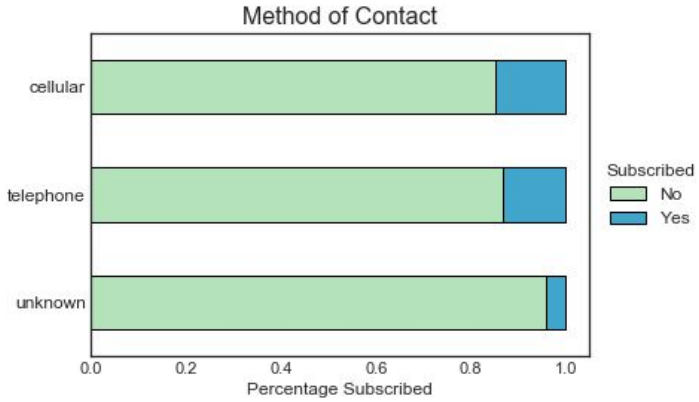
Can we predict who will subscribe?

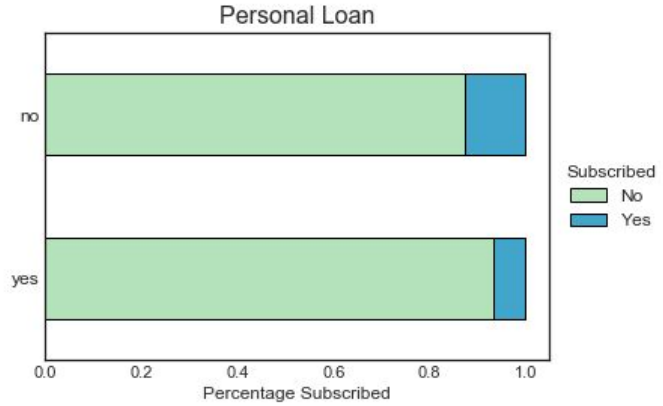


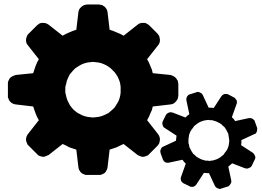

Influence on Subscription
0.2
0.1
0.0
−0.1
−0.2
contact_unknown
campaign
housing_yes
season_summer
marital_married
loan_yes
education_primary
job_management
day_binned_3
education_secondary
job_housemaid
job_unknown
job_technician
job_entrepreneur
job_services
season_winter
age
default_yes
day_binned_2
job_self-employed
job_admin.
default_no
job_blue-collar
marital_divorced
education_unknown
season_fall
job_unemployed
day_binned_1
job_student
contact_telephone
loan_no
education_tertiary
marital_single
balance
season_spring
job_retired
housing_no
contact_cellular

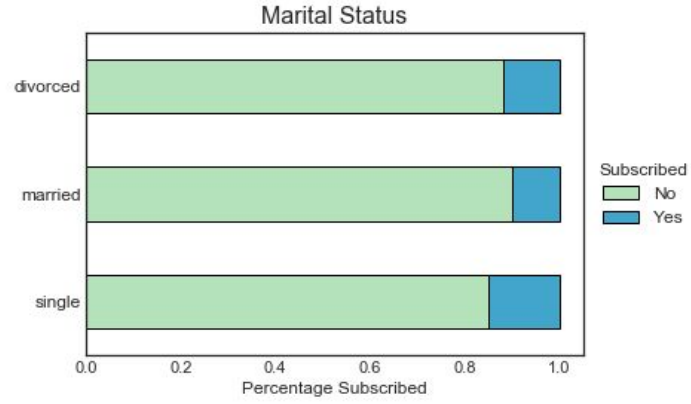

Number of Times Contacted During Campaign
Contacted
2.5
2.0
1.5
1.0
0.5
0.0
no
yes

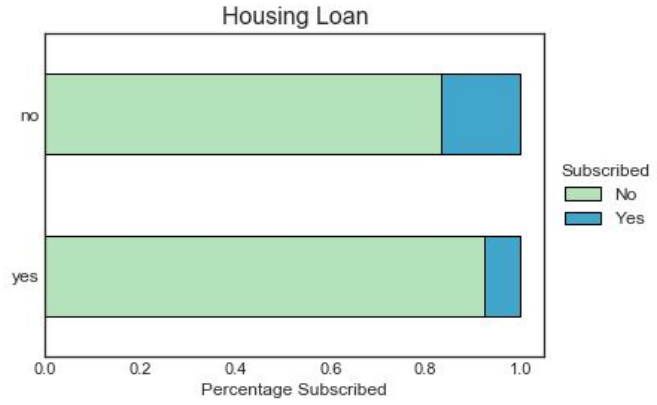

Bank Account Balance
Balance
1750
1500
1250
1000
750
500
250
0
no
yes

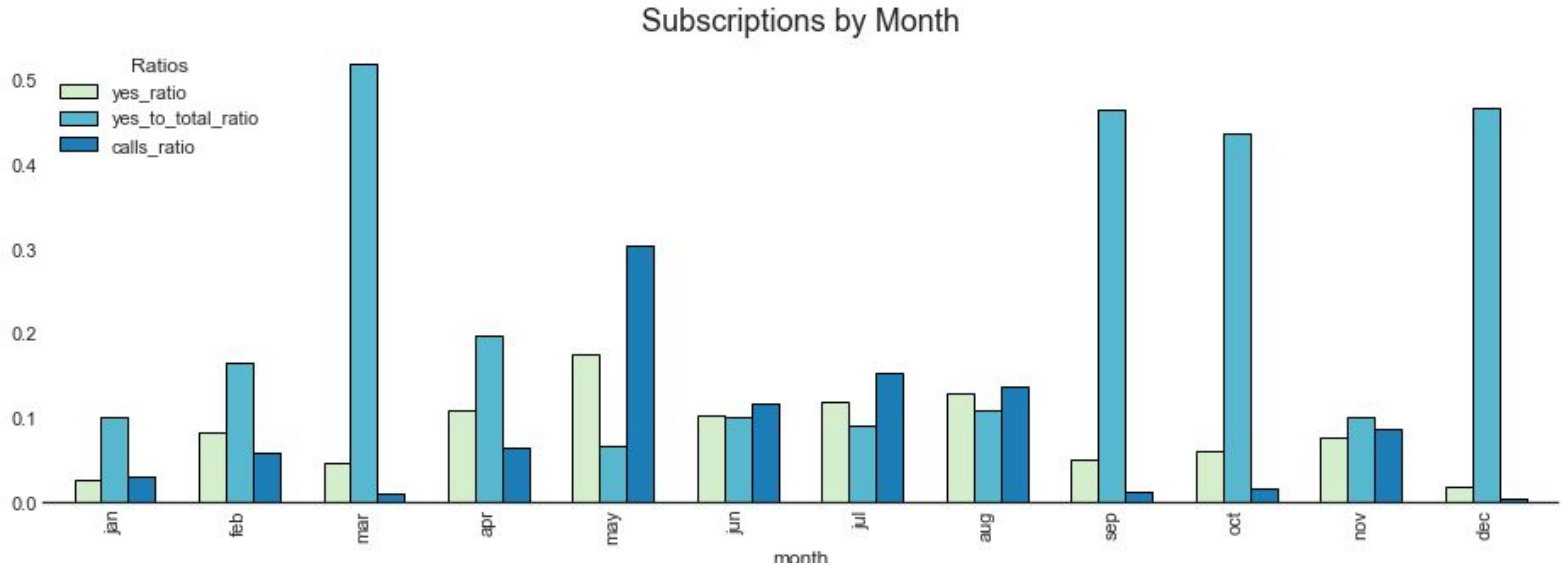

Method of Contact
cellular
telephone
unknown
0.0
0.2
0.4
0.6
0.8
1.0
Percentage Subscribed
Subscribed
No
Yes

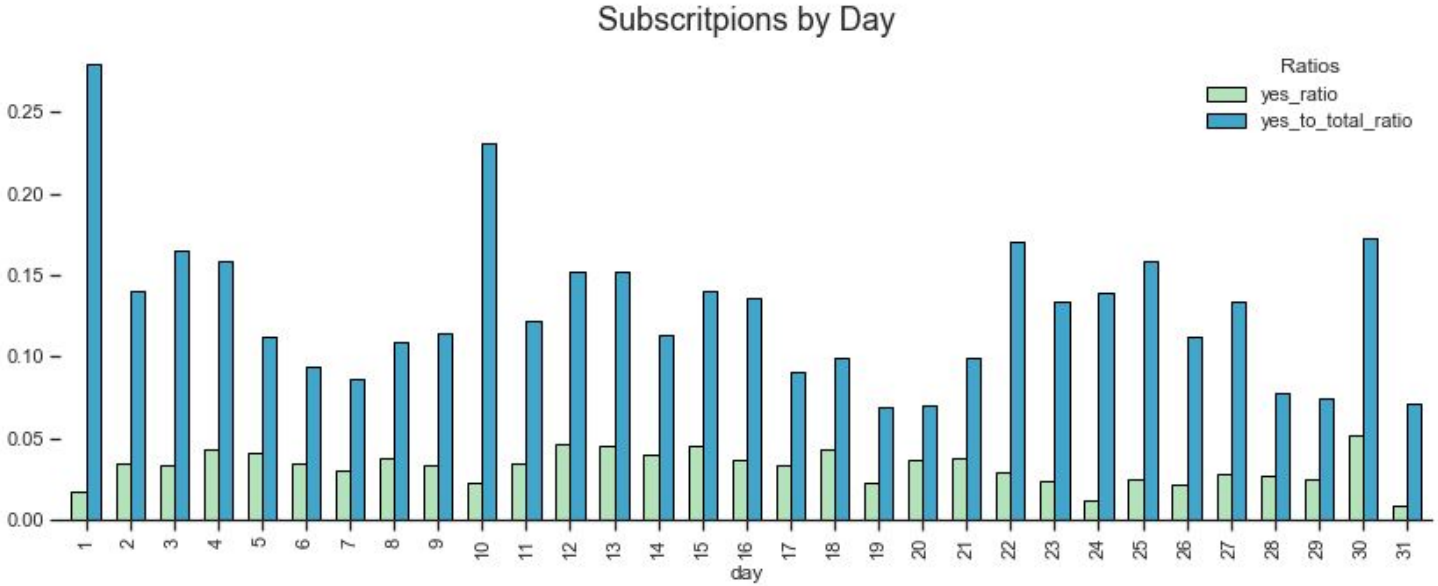

Personal Loan
no
yes
0.0
0.2
0.4
0.6
0.8
1.0
Percentage Subscribed
Subscribed
No
Yes




Marital Status
divorced
married
single
0.0
0.2
0.4
0.6
0.8
1.0
Percentage Subscribed
Subscribed
No
Yes


Housing Loan
no
yes
0.0
0.2
0.4
0.6
0.8
1.0
Percentage Subscribed
Subscribed
No
Yes


Subscriptions by Month
Ratios
yes_ratio
yes_to_total_ratio
calls_ratio
0.5
0.4
0.3
0.2
0.1
0.0
jan
feb
mar
apr
may
jun
jul
aug
sep
oct
nov
dec
month

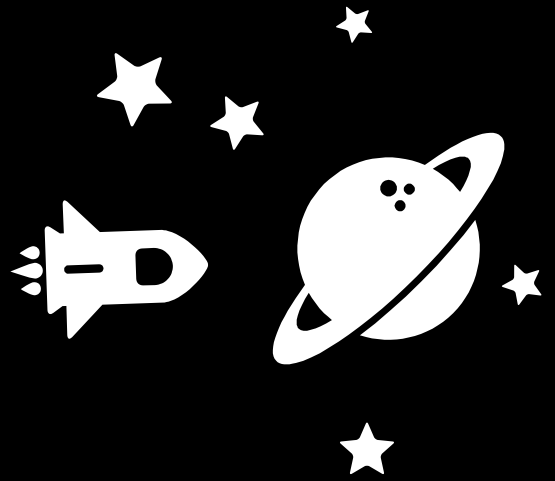

Subscritpions by Day
Ratios
yes_ratio
yes_to_total_ratio
0.25
0.20
0.15
0.10
0.05
0.00
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
day

Improve Term Deposits

Better Target Potential Subscribers

- Those who previously subscribed
- New customers *classified* as potential subscribers.

Improve Classification

Include questions in future campaigns to better predict subscribers

Thank you