

Marketing Analysis among financial institutions

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Background:

- Due to the increase of marketing campaigns, it is important to forecast the suitable advertising strategy that targets the appropriate demographic.
- As of January 12th, 2021, according to Wikipedia. The sole reason that 97.4% of the products are being sold is because of financial institutions' marketing initiatives.
- The budget and duration of the campaign should be estimated in accordance with the different campaign types using an interactive dashboard.

About the dataset:

- We have used “Bank Marketing Dataset” from UCI Machine Learning Dataset.
- The data is related with direct marketing campaigns of a Portuguese banking institution.
- The marketing campaigns were based on phone calls. Often, more than one contact to the same client was required, in order to access if the product (bank term deposit) would be (or not) subscribed.

Show 10 entries

Search:

	...1	age	job	marital	education	default	balance	housing	loan	contact	day	month	duration	campaign	pdays	previous
1	1	58	management	married	tertiary	no	2143	yes	no	unknown	5	may	261	1	-1	0
2	2	44	technician	single	secondary	no	29	yes	no	unknown	5	may	151	1	-1	0
3	3	33	entrepreneur	married	secondary	no	2	yes	yes	unknown	5	may	76	1	-1	0
4	4	47	blue-collar	married	unknown	no	1506	yes	no	unknown	5	may	92	1	-1	0
5	5	33	unknown	single	unknown	no	1	no	no	unknown	5	may	198	1	-1	0
6	6	35	management	married	tertiary	no	231	yes	no	unknown	5	may	139	1	-1	0
7	7	28	management	single	tertiary	no	447	yes	yes	unknown	5	may	217	1	-1	0
8	8	42	entrepreneur	divorced	tertiary	yes	2	yes	no	unknown	5	may	380	1	-1	0
9	9	58	retired	married	primary	no	121	yes	no	unknown	5	may	50	1	-1	0
10	10	43	technician	single	secondary	no	593	yes	no	unknown	5	may	55	1	-1	0

Showing 1 to 10 of 45,211 entries

Previous 1 2 3 4 5 ... 4,522 Next

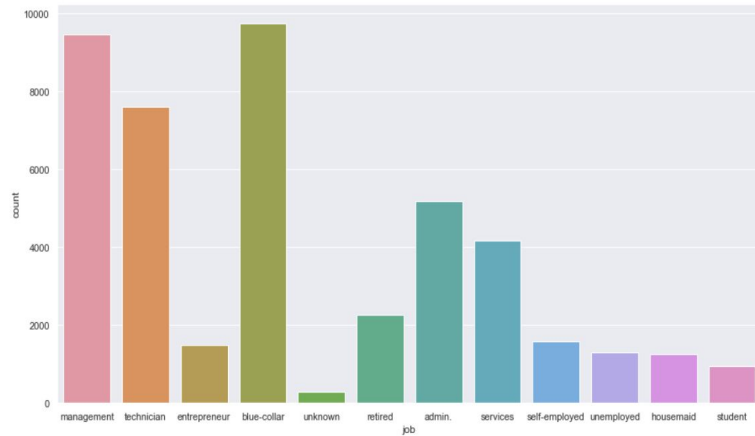
Link for the dataset: [BANK MARKETING DATASET](#)

Data Description

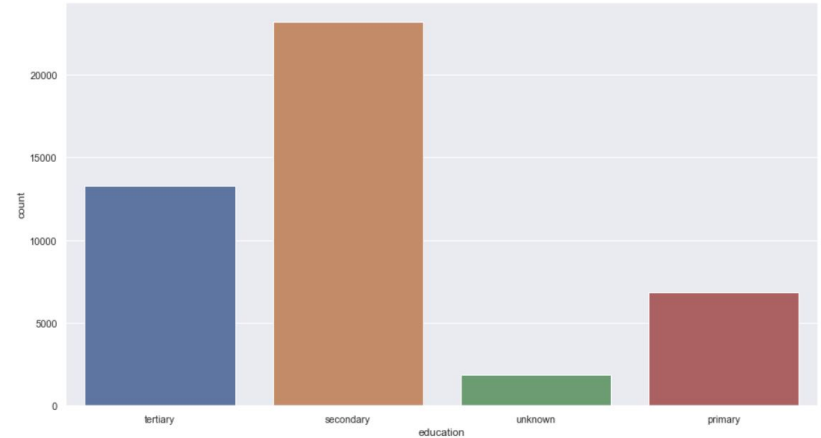
...1	age	job	marital	education	default	balance
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1st Qu.:11304	1st Qu.:33.00	Class :character	Class :character	Class :character	Class :character	1st Qu.: 72
Median :22606	Median :39.00	Mode :character	Mode :character	Mode :character	Mode :character	Median : 448
Mean :22606	Mean :40.94					Mean : 1362
3rd Qu.:33909	3rd Qu.:48.00					3rd Qu.: 1428
Max. :45211	Max. :95.00					Max. :102127
housing	loan	contact	day	month	duration	campaign
Length:45211	Length:45211	Length:45211	Min. : 1.00	Length:45211	Min. : 0.0	Min. : 1.000
Class :character	Class :character	Class :character	1st Qu.: 8.00	Class :character	1st Qu.: 103.0	1st Qu.: 1.000
Mode :character	Mode :character	Mode :character	Median :16.00	Mode :character	Median : 180.0	Median : 2.000
			Mean :15.81		Mean : 258.2	Mean : 2.764
			3rd Qu.:21.00		3rd Qu.: 319.0	3rd Qu.: 3.000
			Max. :31.00		Max. :4918.0	Max. :63.000
pdays	previous	poutcome	y			
Min. : -1.0	Min. : 0.0000	Length:45211	Length:45211			
1st Qu.: -1.0	1st Qu.: 0.0000	Class :character	Class :character			
Median : -1.0	Median : 0.0000	Mode :character	Mode :character			
Mean : 40.2	Mean : 0.5803					
3rd Qu.: -1.0	3rd Qu.: 0.0000					
Max. :871.0	Max. :275.0000					

EDA

JOB

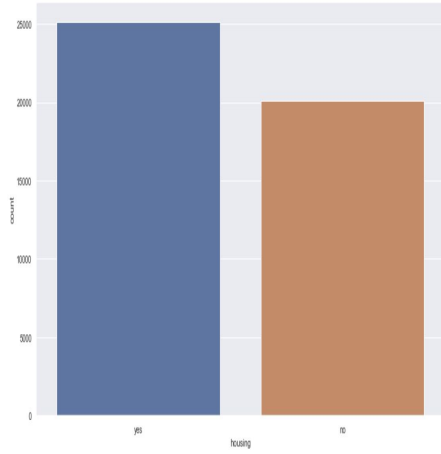


EDUCATION

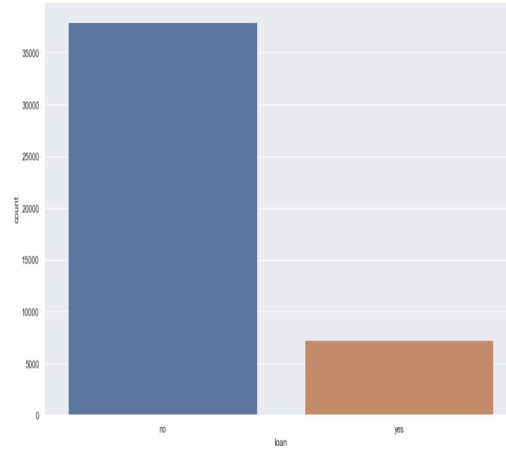


There are 12 unique Job values, 4 unique education values and 3 marital values

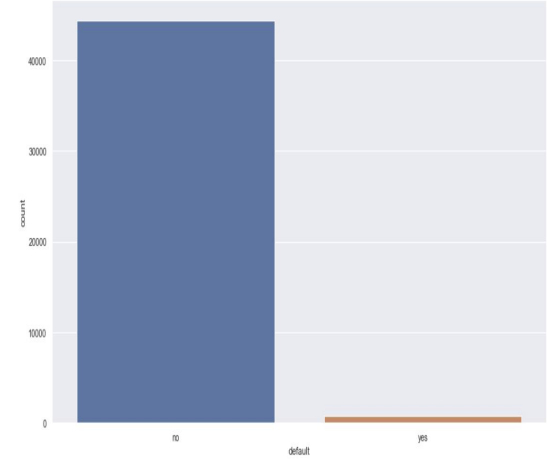
Binary Attributes



HOUSING

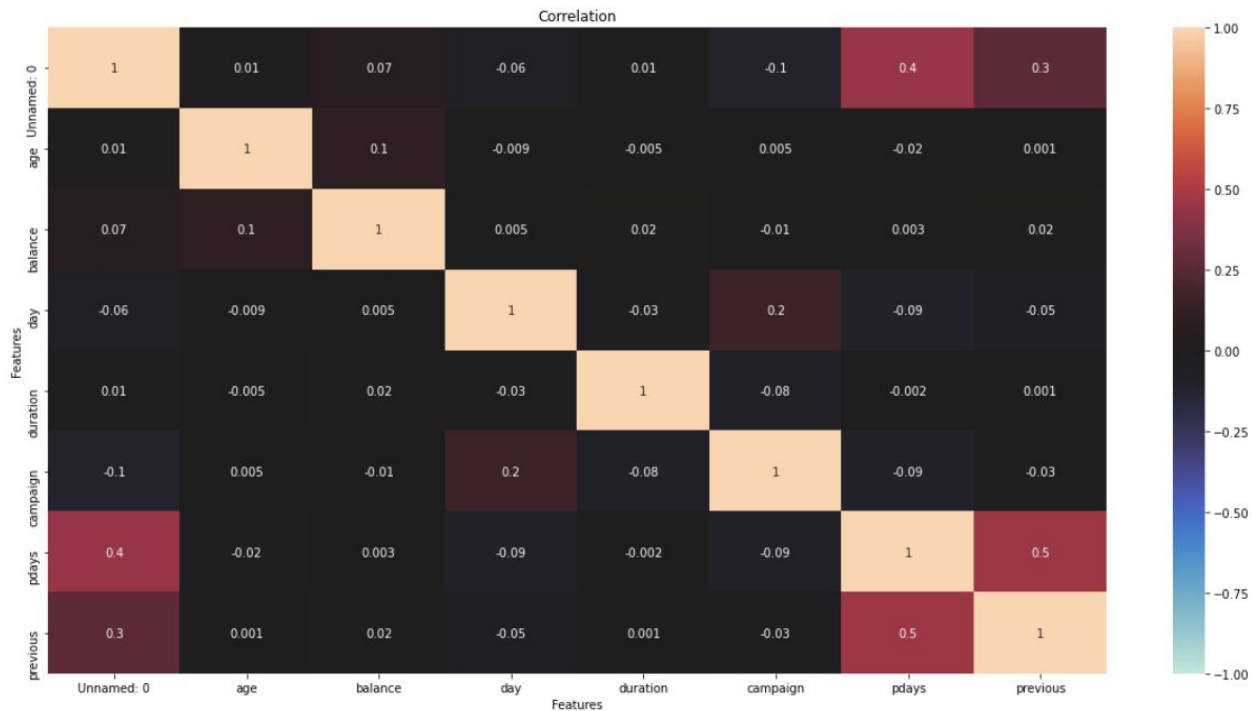


LOAN



DEFAULT

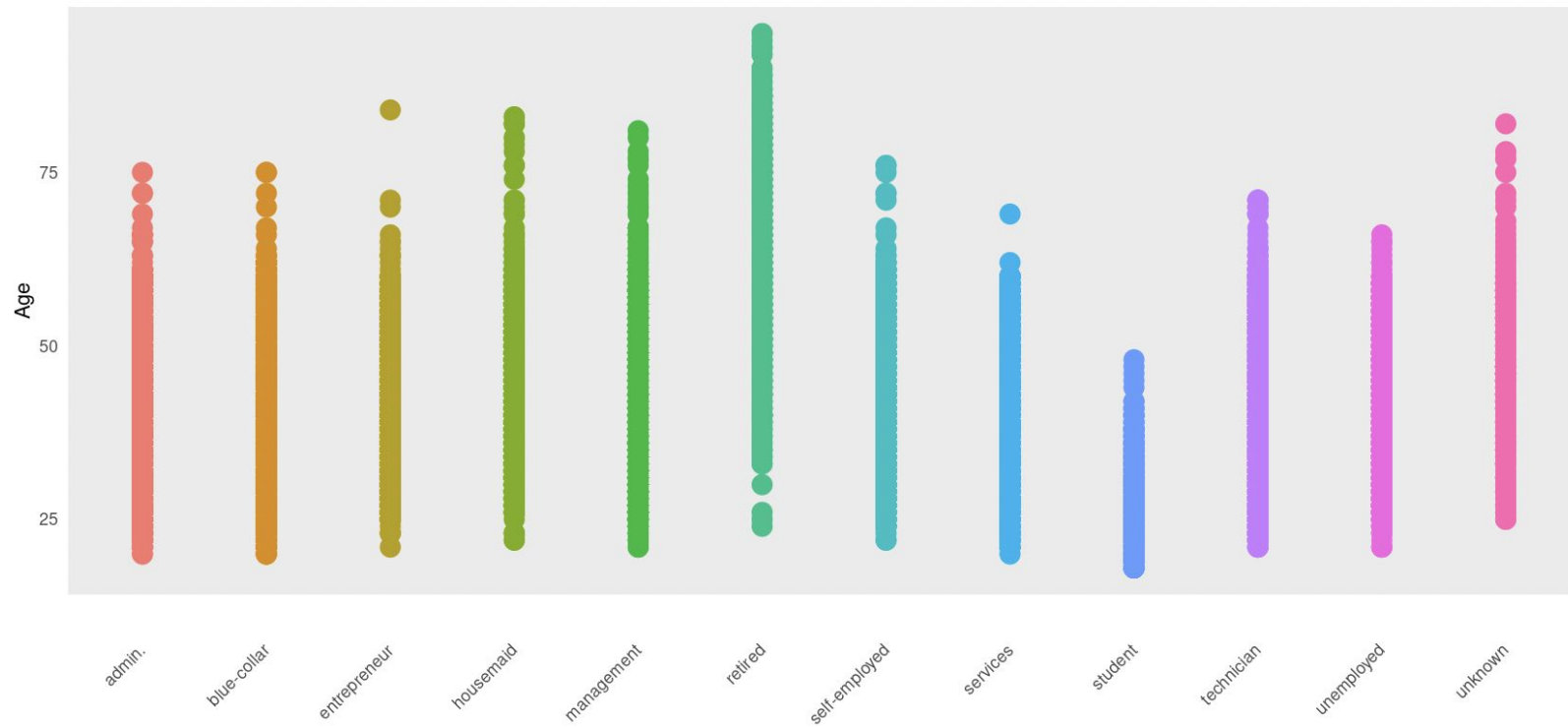
Correlation heatmap



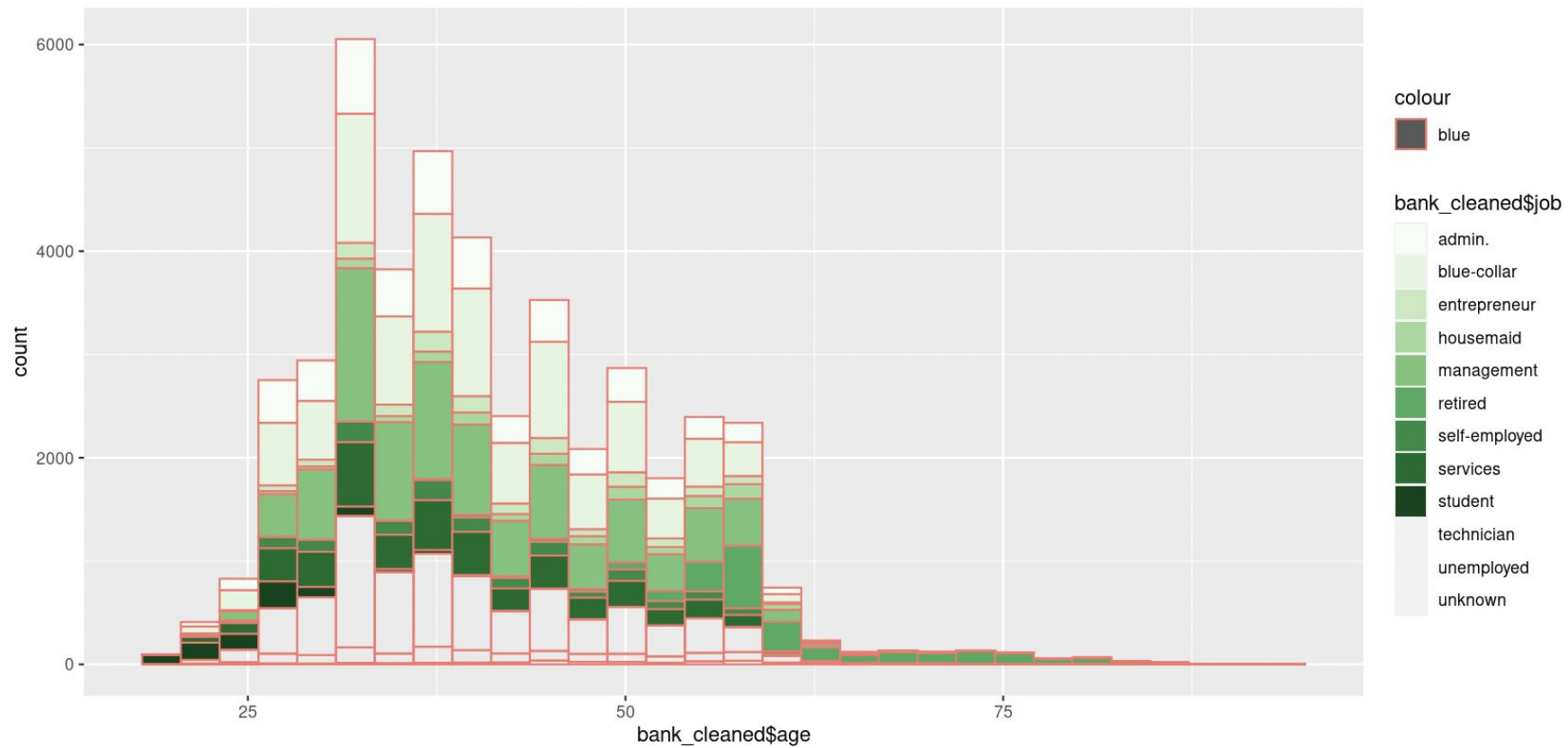
Employee with suitable experience and training



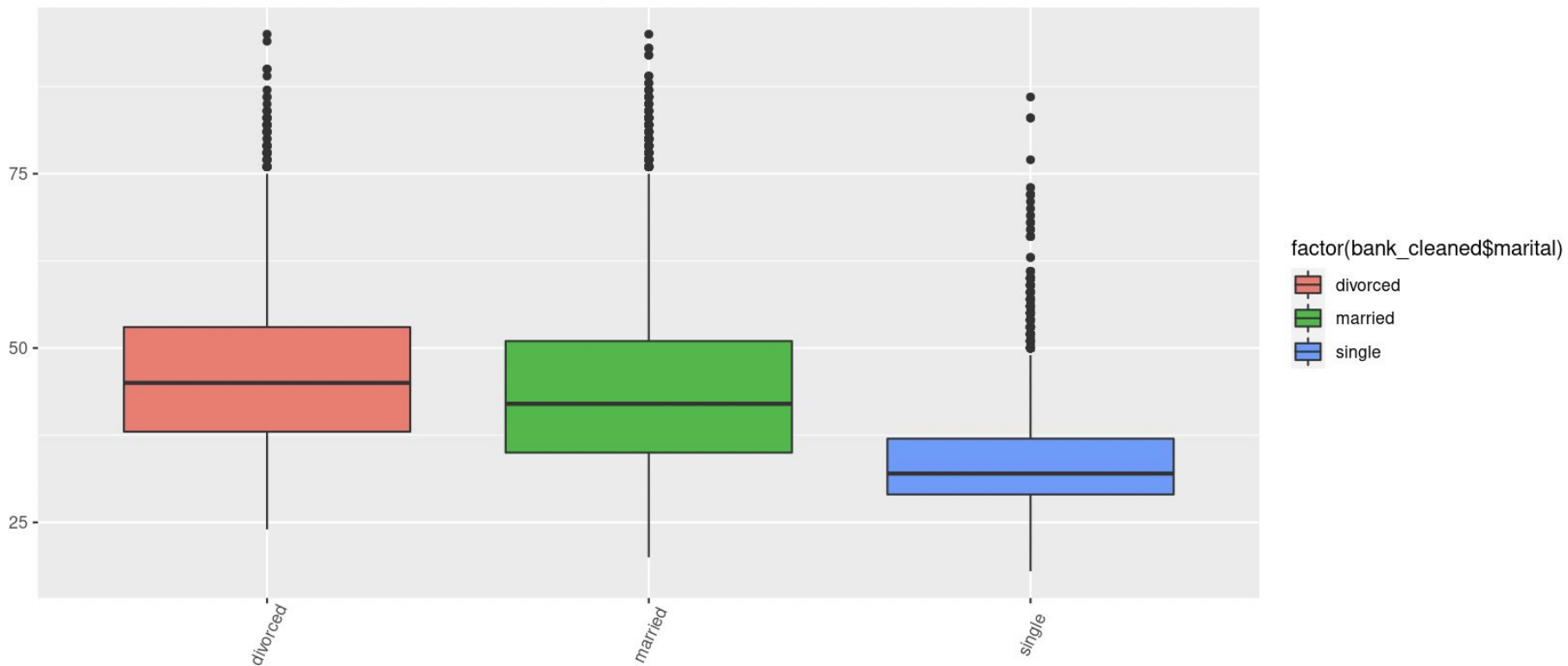
Job Department vs AGE



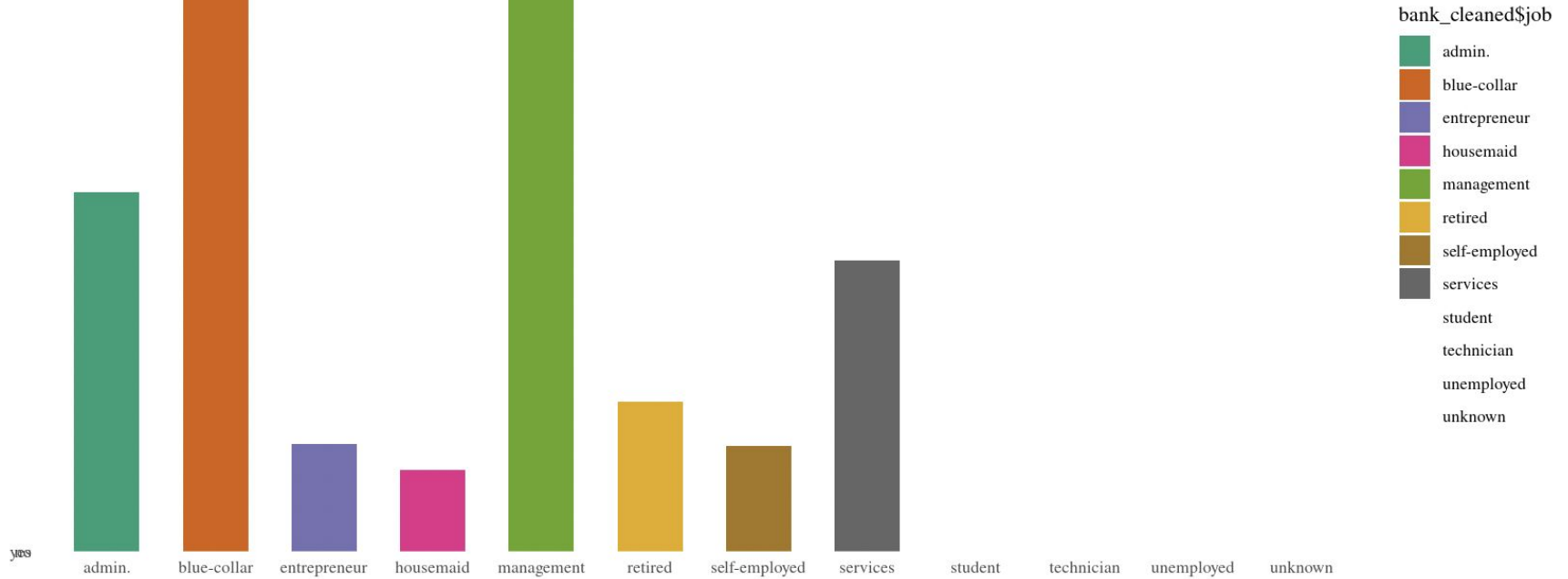
Senior staff in the investment industry



Married Employees Working in Investment industry



Employees who took loan in the investment industry



Conclusion and Scope

On processing the data, we came to the following conclusion:

- The employees who had primary education have been employed for a longer duration as compared to the rest.
- There are a very few number of people who turning into entrepreneurs after crossing 75 years of age.
- Surprisingly, housemaids have been working for a longer period of time in this sector.

FUTURE SCOPE :

This dataset can be used for bank marketing campaigns and accordingly target customers based on type of education, marital status and various other attributes.