

Bank Marketing

A detailed review of campaign effectiveness



Yi Yin (Ian) Chen
BAX-421
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Table of contents

01

Introduction

02

Methodology

03

**Business
Questions**

04

Conclusion





Introduction

- Analyzed the effectiveness of a marketing campaign focused
- Examined the relationship between customer subscription rates and various attributes



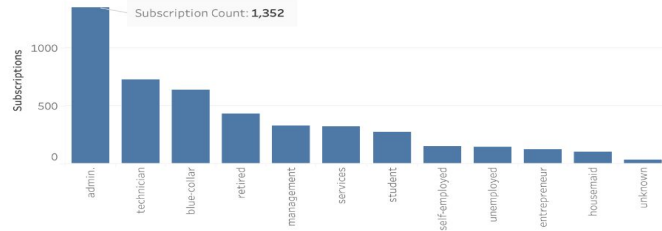
Methodology

- MySQL as main data query tool
- Managed Visualization in Tableau
- Leveraged statistical methods to analyze key attributes
- EDAs

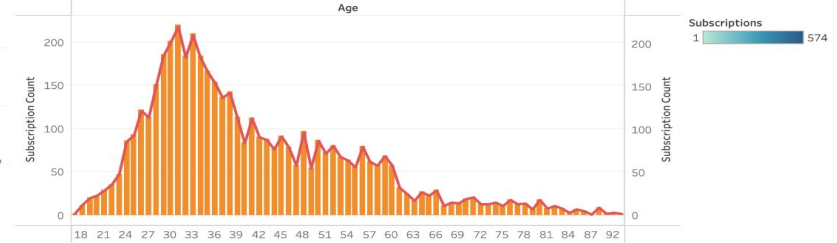


What is the distribution of term deposit subscriptions across different job categories and how does age factor into this?

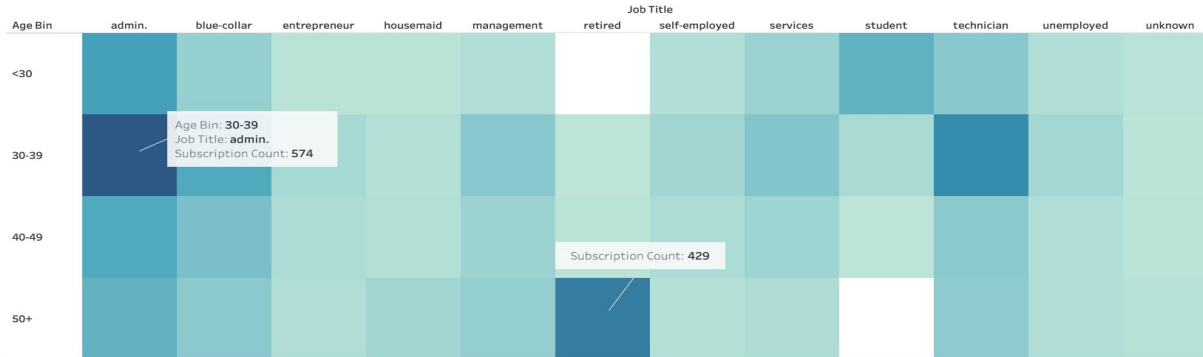
Q1: Subscription Distribution - Jobs



Q1: Age Distribution - Each Job Category

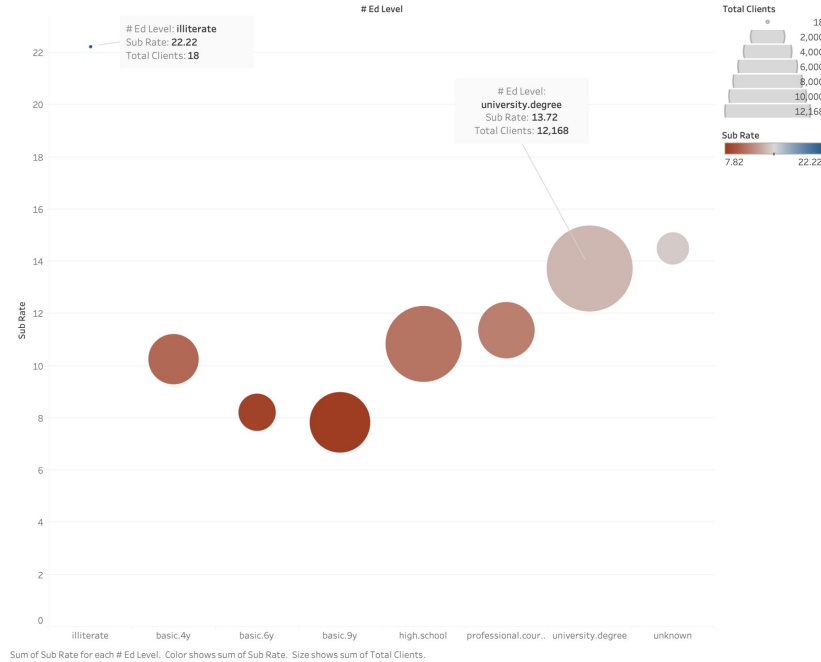


Q1: Job vs Age bins



How does the level of education influence a client's decision to subscribe to a term deposit?

Q2: Education Level Analysis



What patterns emerge in term deposit subscriptions with respect to different months and contact methods?

Q3: Contact Method Analysis



Q3: Overview

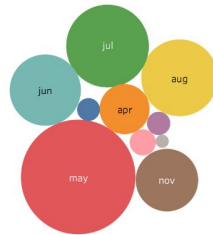
month	Contact Type	Subscribed Count	Not Subscribed Count	Total Contacts	Subscription Rate
mar	cellular	252	234	486	51.85
	telephone	24	36	60	40.00
apr	cellular	493	1,952	2,445	20.16
	telephone	46	141	187	24.60
may	cellular	614	4,904	5,518	11.13
	telephone	272	7,979	8,251	3.30
jun	cellular	349	471	820	42.56
	telephone	210	4,288	4,498	4.67
jul	cellular	591	5,505	6,096	9.69
	telephone	58	1,020	1,078	5.38
aug	cellular	619	5,290	5,909	10.48
	telephone	36	233	269	13.38
sep	cellular	238	244	482	49.38
	telephone	18	70	88	20.45
oct	cellular	253	310	563	44.94
	telephone	62	93	155	40.00
nov	cellular	366	3,310	3,676	9.96
	telephone	50	375	425	11.76
dec	cellular	78	71	149	52.35
	telephone	11	22	33	33.33

month
mar
apr
may
jun
jul
aug
sep
oct
nov
dec

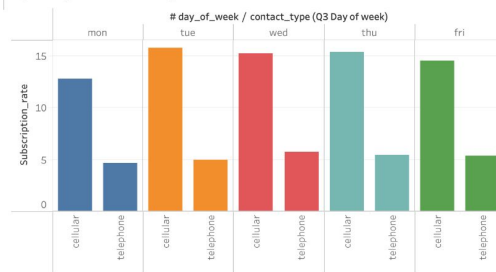
Contact Type
cellular
telephone

day_of_week
mon
tue
wed
thu
fri

Q3: Total Contacts Each Month

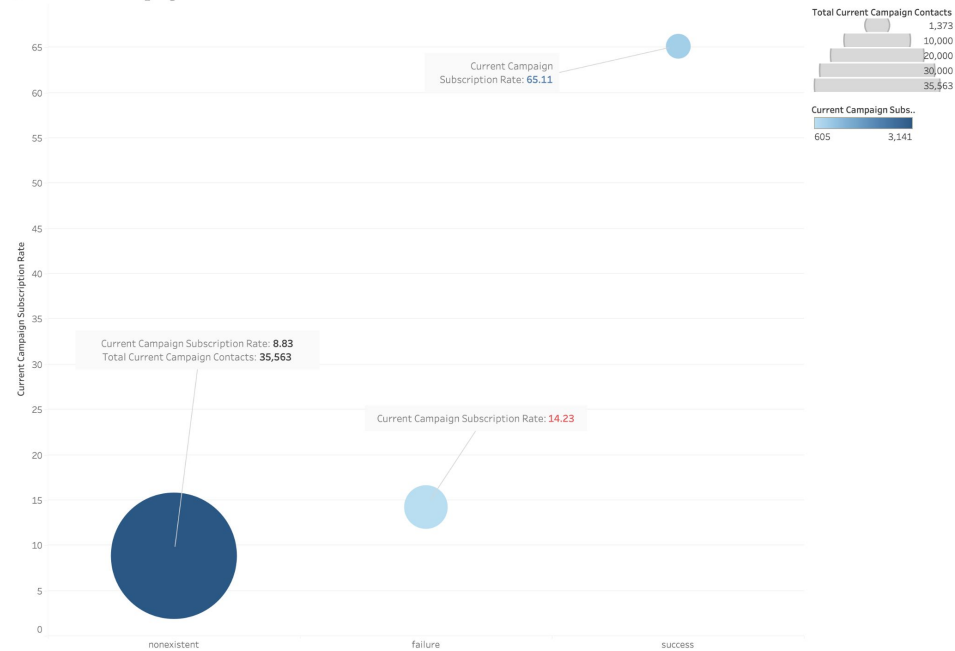


Q3: Day of week analysis



Does the outcome of previous marketing campaigns correlate with the current campaign's success rate?

Q4: Previous Campaign vs Current



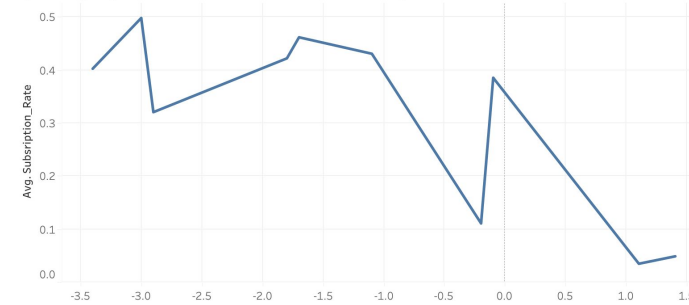
Sum of Current Campaign Subscription Rate for each # Poutcome. Color shows sum of Current Campaign Subscribed Count. Size shows sum of Total Current Campaign Contacts.



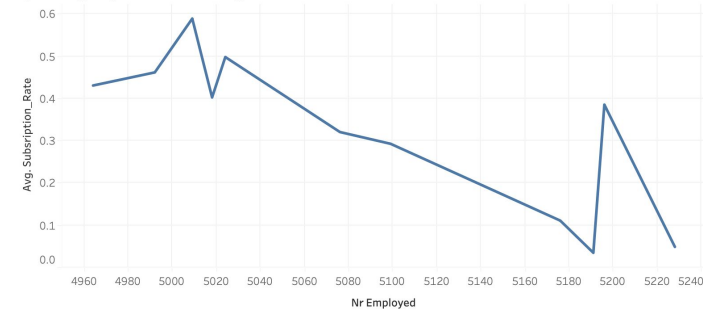
How do key economic indicators like the employment rate and consumer confidence index affect the propensity for subscribing to term deposits?

Index	Correlation
Employment Variation Rate	-0.3
Consumer Price Index	-0.14
Consumer Confidence Index	0.05
Euribor 3-month Rate	-0.31
Number Of Employed	-0.35

Q5: Employment Variation Rate vs Subscription Rate



Q5: Employed vs Subscription Rate



Is there a notable difference in subscription rates among different marital statuses?

Q6: Marital Status vs Subscription Rate

# Marital Status	
divorced	10.321
married	10.157
single	14.004
unknown	15.000

Sum of Subscription Rate broken down by # Marital Status.

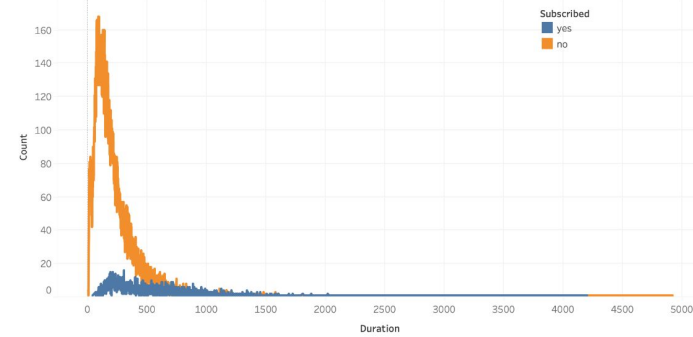


What is the typical duration of successful marketing calls compared to those that do not result in a subscription?

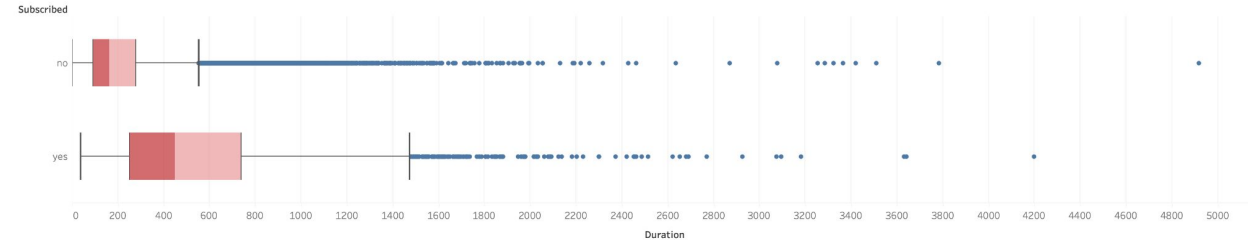
Q7: Duration Summary

# Subscribed	Average Call Duration	Max Duration In Group	Min Duration In Group	Stddev Duration
no	221	4,918	0	207
yes	553	4,199	37	401

Q7: Duration Distribution

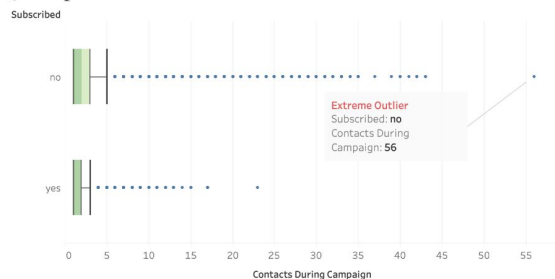


Q7: Duration BoxPlot Analysis

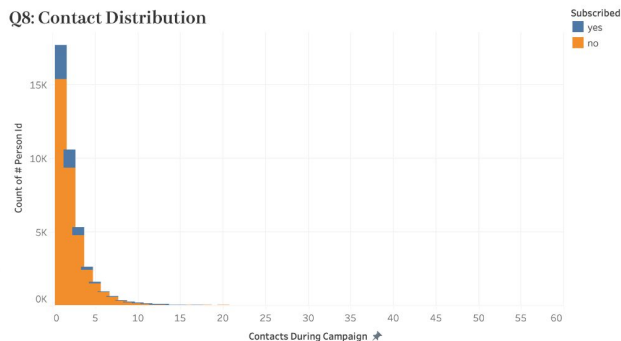


How does the frequency of contact in the current campaign impact the likelihood of subscription?

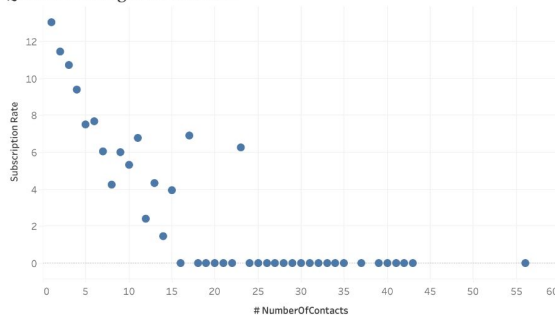
Q8: Boxplot of Contacts



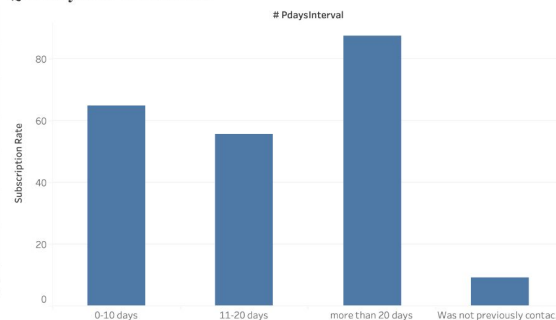
Q8: Contact Distribution



Q8: Contacts against Sub Rate



Q8: Pdays bin vs Sub Rate



Conclusions

- Target younger administrators
- Focus on university graduates and tailor campaigns for others.
- Utilize cellular contacts effectively.
- Differentiate engagement strategies for previously contacted versus new clients.
- Adjust messaging based on economic conditions.
- Develop campaigns specific to marital status, with a focus on single clients.
- Optimize call center performance.
- Minimize follow-up contacts.

