

# Behavioral Analysis of Investment Decisions on Shark Tank India

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Hypotheses tested and their results

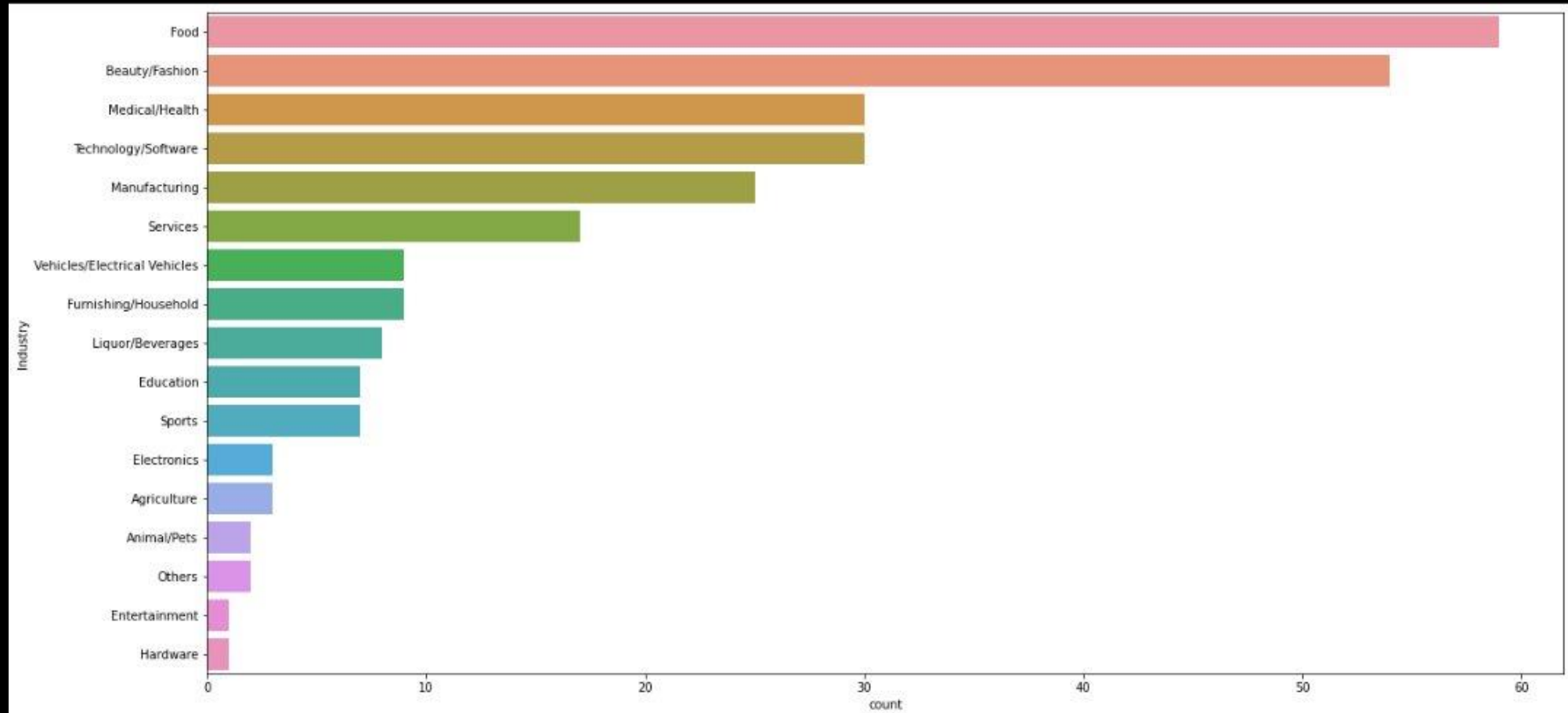
# 1: Loss Aversion

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Logit Regression Results
=====
Dep. Variable:      Received Offer    No. Observations:      129
Model:              Logit             Df Residuals:          127
Method:             MLE               Df Model:              1
Date:               Thu, 18 Apr 2024   Pseudo R-squ.:         6.520e-05
Time:               11:13:28           Log-Likelihood:         -76.372
converged:          True               LL-Null:                -76.377
Covariance Type:    nonrobust          LLR p-value:            0.9205
=====
               coef      std err          z      P>|z|      [0.025      0.975]
-----
const          1.0004      0.551        1.816     0.069     -0.079      2.080
Gross Margin   -0.0009      0.009       -0.100     0.920     -0.019      0.017
=====
```

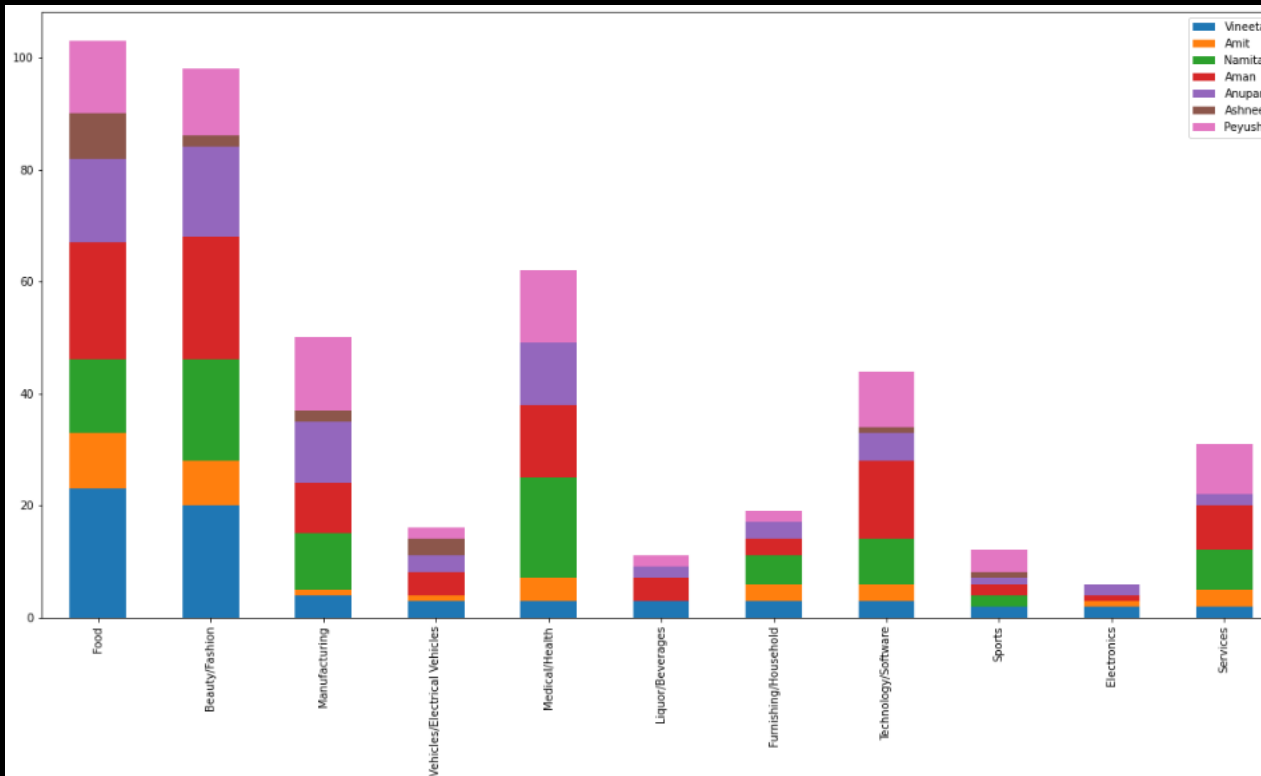
Logistic Regression with 'Received Offer' against:

- 'Gross Margin'
- 'Net Margin'
- 'Cash Burn'

# Distribution by Industry



# Investments by Sharks per Industry



Vehicles/EV : 0.001

Health : 1.4e-15

Furnishing : 9.6e-9

Sports : 1.2e-5

Electronics : 4.2e-18

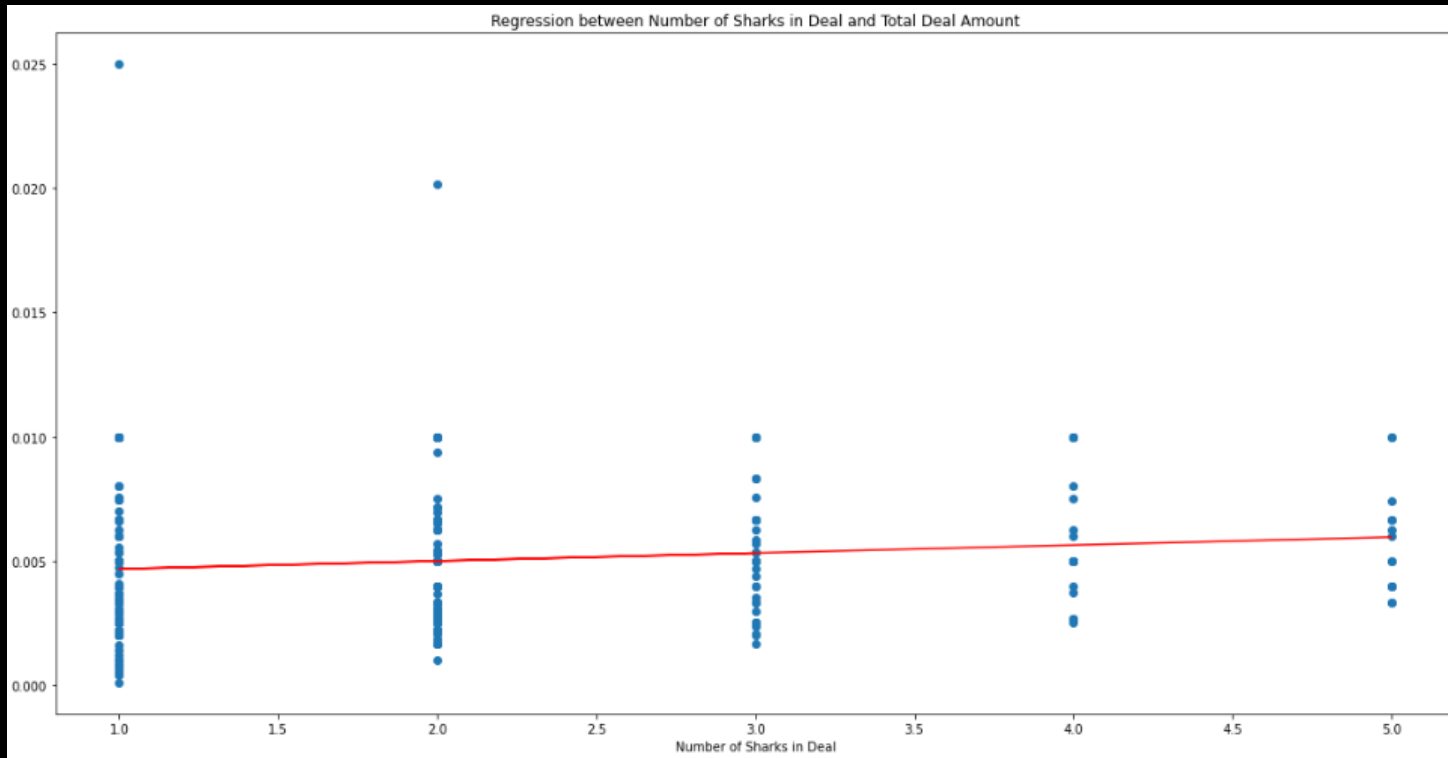
Services : 0.0005

## 2: Anchoring Effect

Linear Regression with 'Original Ask Amount', 'Original Offered Equity', 'Valuation Requested' against 'Total Deal Amount'

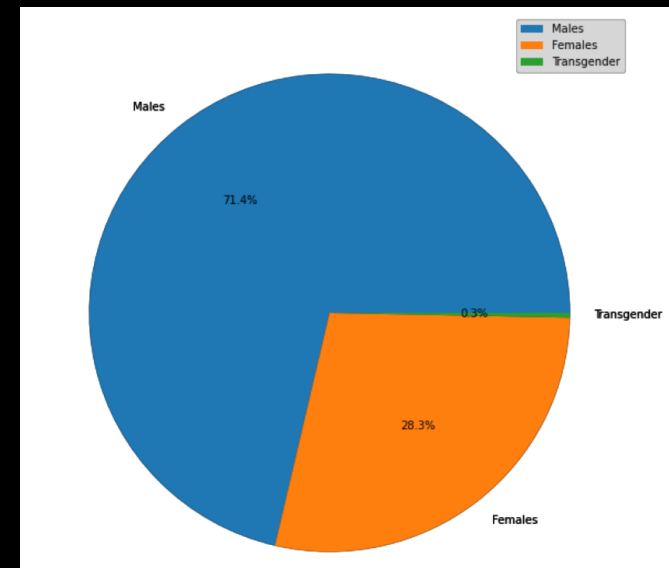
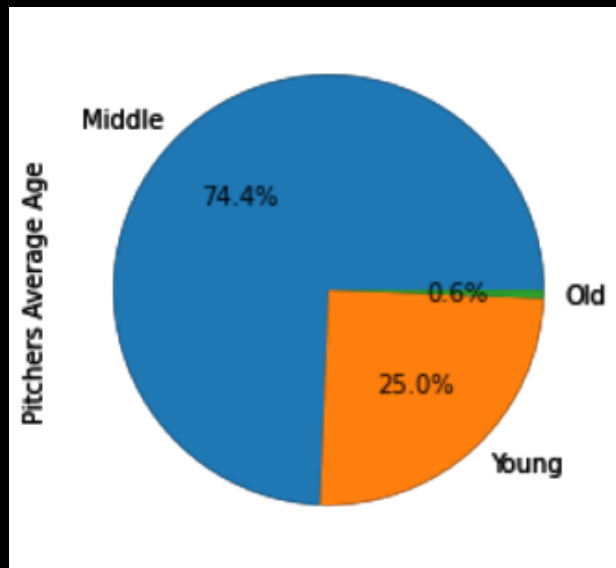
p-value < 0.05

# 3: Cooperation and Competition



OLS Regression Results							
Dep. Variable:	y	R-squared:	0.016				
Model:	OLS	Adj. R-squared:	0.012				
Method:	Least Squares	F-statistic:	4.155				
Date:	Thu, 18 Apr 2024	Prob (F-statistic):	0.0425				
Time:	03:06:51	Log-Likelihood:	1171.4				
No. Observations:	265	AIC:	-2339.				
Df Residuals:	263	BIC:	-2332.				
Df Model:	1						
Covariance Type:	nonrobust						
		coef	std err	t	P> t	[0.025	0.975]
	const	0.0044	0.000	12.072	0.000	0.004	0.005
Number of Sharks in Deal	0.0003	0.000	2.038	0.043	1.09e-05	0.001	
Omnibus:	149.149	Durbin-Watson:	1.878				
Prob(Omnibus):	0.000	Jarque-Bera (JB):	1305.777				
Skew:	2.105	Prob(JB):	2.85e-284				
Kurtosis:	13.027	Cond. No.	5.31				

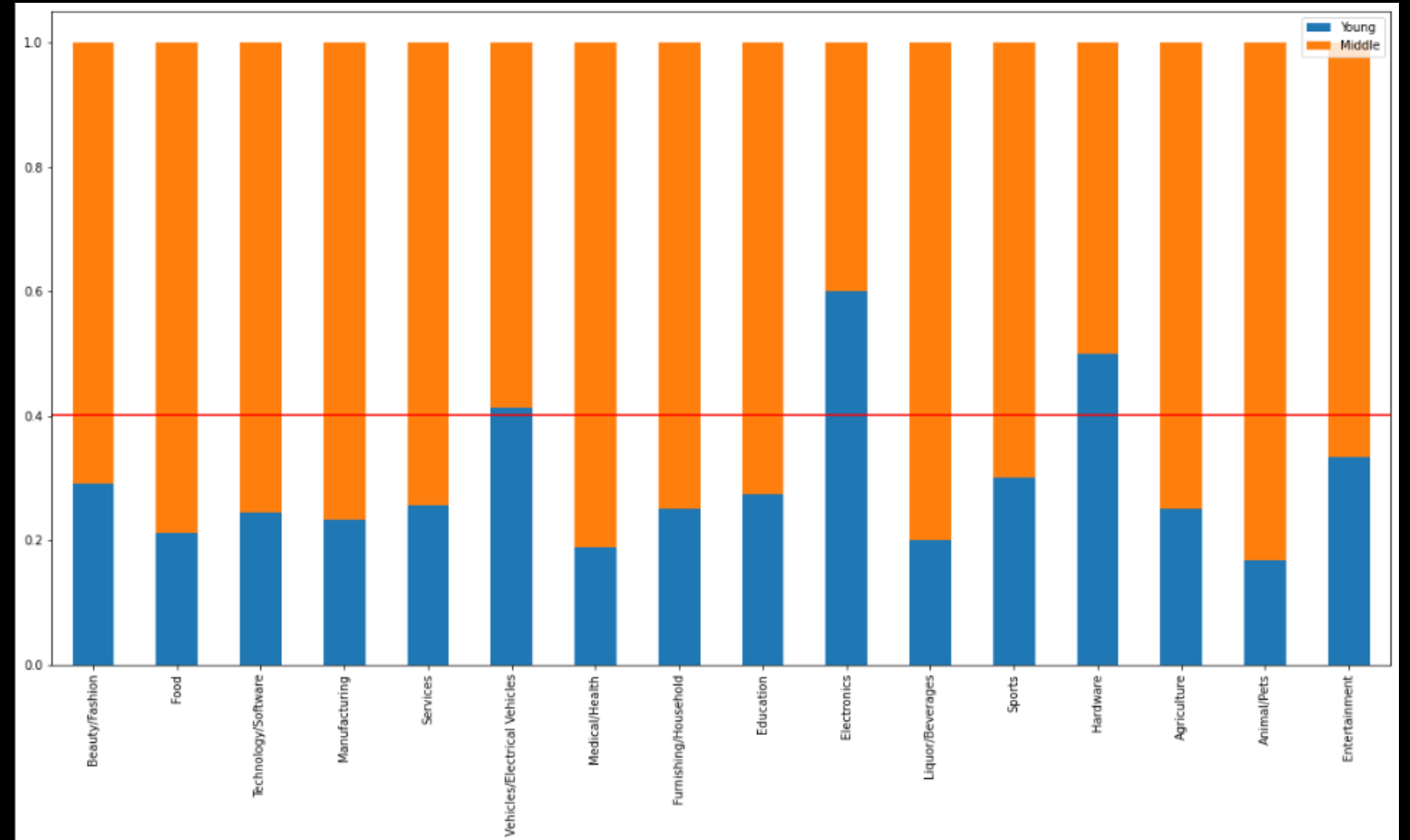
# Age and Gender Distribution





# Pitcher Age in Each Industry

Electronics :  $6.3e-16$   
Liquor/Beverages : 0.0001



## 4: Gender and Background Biases

'Amit Debt Amount' to Males :

Correlation 0.76

p-value 0.007

# 5: Risk Taking Propensity

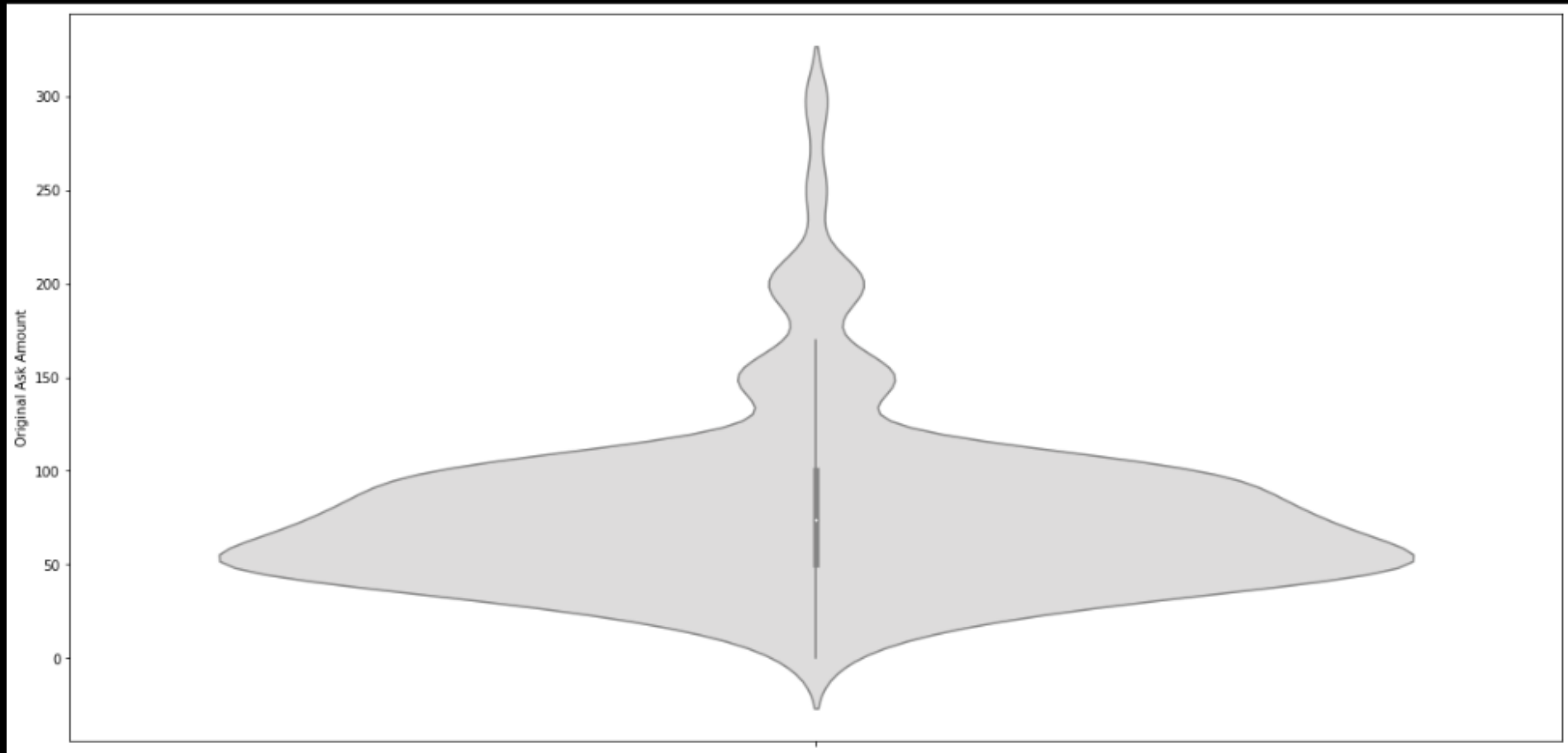
Logistic Regression with 'SKUs' against 'Received Offer'

Chi-Square Test with 'Has Patents', 'Bootstrapped' against 'Received Offer'

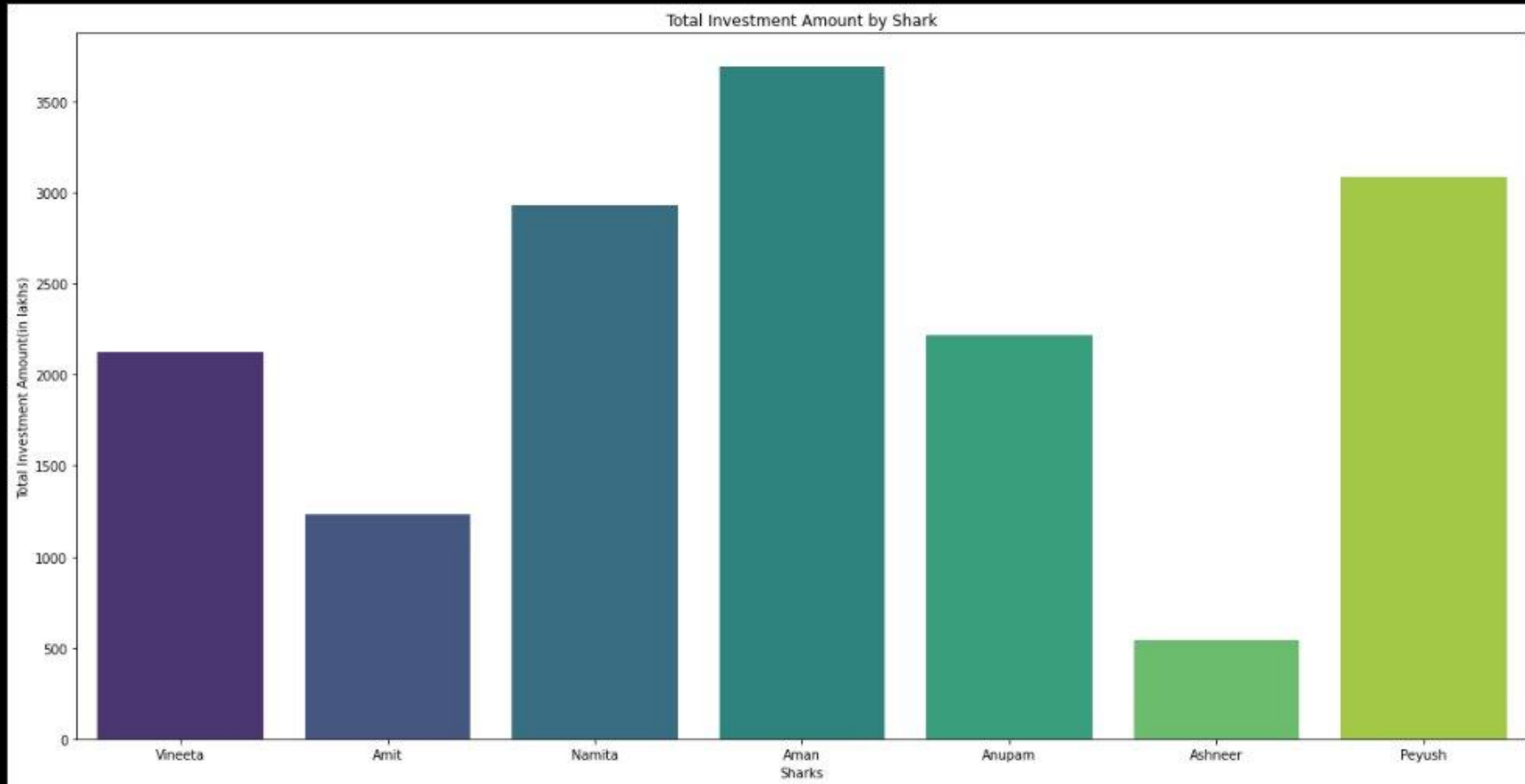
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                                Logit Regression Results
=====
Dep. Variable:      Received Offer    No. Observations:      28
Model:              Logit             Df Residuals:          26
Method:             MLE               Df Model:              1
Date:               Thu, 18 Apr 2024   Pseudo R-squ.:         0.03602
Time:               11:38:01           Log-Likelihood:         -16.949
converged:          True               LL-Null:                -17.582
Covariance Type:    nonrobust          LLR p-value:            0.2604
=====
                                coef      std err          z      P>|z|      [0.025      0.975]
-----
const              0.5476         0.458         1.197     0.231     -0.349      1.445
SKUs                0.0014         0.002         0.615     0.539     -0.003      0.006
=====
```

# Violin Plot of Ask Amounts



# Total Investment by Each Sharks



# Conclusion