ENHANCING STRATEGIC DECISION-MAKING FOR ELITE GLOBAL INTELLIGENCE TECHNOLOGIES

COMPREHENSIVE DATA ANALYSIS CYCLE

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EXCUTIVE SUMMARY

This project aims to enhance the strategic decision-making process for Elite Global Intelligence Technologies by leveraging data analytics.

The primary business question addressed is: "How can Elite Global Intelligence Technologies increase its ROI by improving customer retention, optimizing training budgets, and adjusting customer acquisition costs?"

The project encompasses defining a business problem, gathering and cleaning data, conducting a full analysis cycle using statistical models, and presenting actionable business insights

INTRODUCTION

In the highly competitive business environment, companies must continuously innovate and optimize their strategies to remain successful.

Elite Global Intelligence Technologies faces the challenge of increasing ROI by improving customer retention, optimizing training budgets, and managing customer acquisition costs.

By leveraging existing business data, the company can gain valuable insights to drive informed decision-making and enhance overall performance.

BACKGROUND OF THE STUDY

Elite Global Intelligence Technologies operates in a dynamic industry where customer satisfaction, retention, and efficient resource allocation are critical to sustained success.

The company has accumulated vast amounts of data, including metrics on market share, customer retention rates, satisfaction scores, training budgets, and customer acquisition costs.

Analyzing this data can uncover actionable insights that inform strategic initiatives to improve business outcomes.

STATEMENT OF THE PROBLEM

The primary challenge for Elite Global Intelligence Technologies is to increase ROI by addressing key business variables such as customer retention, training budget allocation, and customer acquisition costs.

Despite having access to extensive business data, the company needs a systematic approach to analyze these variables and understand their impact on overall performance.
 The lack of clear insights hampers strategic decision-making and the ability to implement effective business strategies.

PROJECT OBJECTIVES

➢ The objectives of this project are to:

- Define a business problem focused on improving customer retention or market share.

- Gather, clean, and validate the necessary data from the provided dataset.

- Conduct a full analysis cycle using statistical models (e.g., regression analysis) to predict the impact of various business variables on overall performance.

- Provide actionable insights and recommendations to enhance strategic decision-making and improve business outcomes.

LITERATURE REVIEW

➤ The literature review will cover key topics related to the project, including:

- **Customer Retention**: The importance of customer retention in driving business growth and profitability. Studies highlighting strategies to improve retention rates and their impact on ROI.

- **Training Budget Optimization**: Research on the relationship between training budget allocation and employee performance, customer satisfaction, and business performance. Effective training strategies and their ROI.

- **Customer Acquisition Costs**: Analysis of customer acquisition costs and their influence on business performance. Methods to optimize acquisition strategies for better financial outcomes.

- **Data Analytics in Business Decision-Making**: The role of data analytics in enhancing strategic decision-making. Case studies and examples of successful data-driven business strategies.

PROJECT METHODOLOGY

- **Brief Explanation of Methodology**

- The methodology for this project involves using a combination of tools—Microsoft Excel, Python, statistical tools, and Power BI—to perform data cleaning, preprocessing, and exploratory analysis on the provided dataset. Here's a brief overview of each tool and its role in the analysis:

- *Microsoft Excel*

- **Data Cleaning:** Microsoft Excel was used for initial data cleaning tasks, such as handling missing values, correcting inconsistencies, and removing duplicates.

- **Basic Analysis:** Regression analysis, correlation, and other relevant analyses and charts in this project are handled using Microsoft Excel and python.

- *Python*

- **Advanced Data Processing:** Python, with libraries like Pandas and NumPy, excels at handling large datasets and performing complex data manipulation and preprocessing tasks.

- **Statistical Analysis:** Python libraries such as SciPy and StatsModels allow for advanced statistical analysis.

- **Data Visualization:** Libraries like Matplotlib and Seaborn are used to create detailed and sophisticated visualizations.

- *Statistical Tools*

- **Descriptive Statistics:** Python's StatsModels was used to calculate key statistical measures such as mean, median, standard deviation

- **Hypothesis Testing:** Perform tests like t-tests, chi-square tests, and ANOVA to understand relationships and differences in the data.

- *Power BI*

- • **Import Data**: Power Query was used to import the dataset from excel.

- **Date Quality :** Power query was used to check the accuracy of the data

- **DASHBOARD VISUALISATION**: Power BI was used to handled the dashboard visualization using various features of the

Power BI such DAX Function

- **Exploratory Data Analysis:**
  - Conduct statistical analysis using Python and Data Analysis Tools in Microsoft Excel.
  - Use Python for detailed data visualizations.
-

DATA CLEANSING RESLTS

➢ **CHECKING FOR DUPLICATE DATA IN EXCEL CONFIRMING 100%** **ACCURACY OF THE DATASET USING POWER BI QUERY**
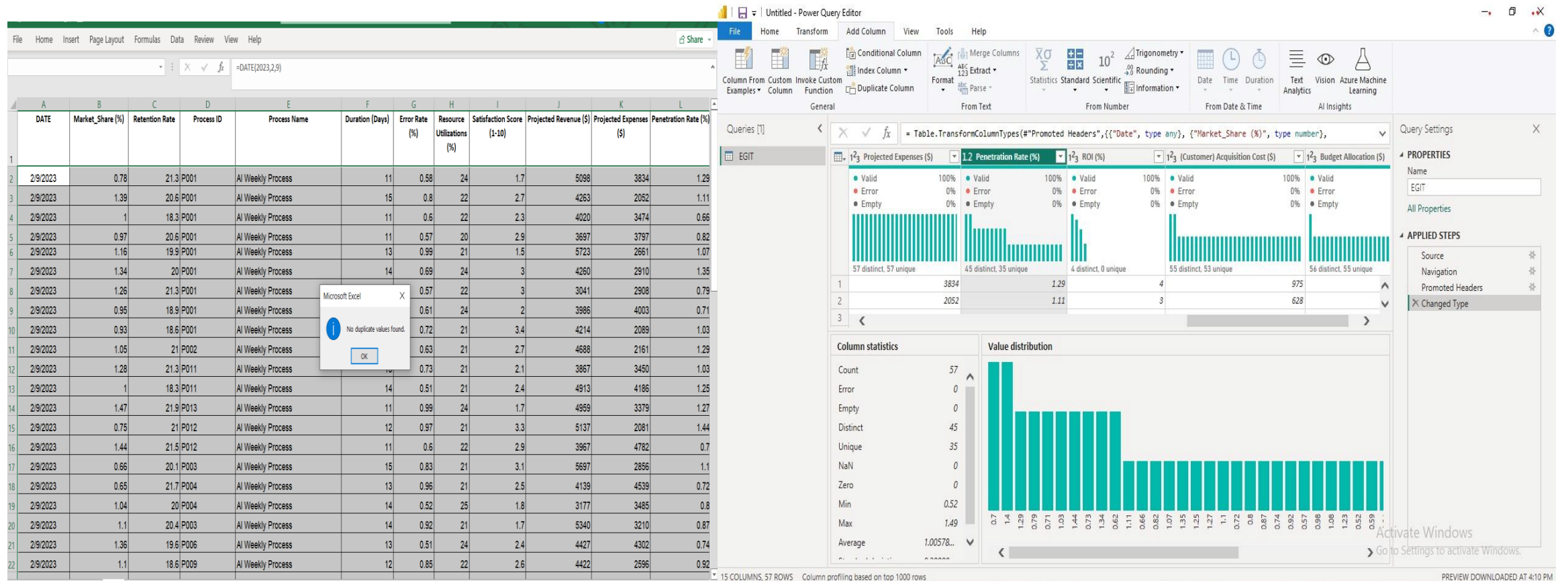
DATA LOADING INTO PYTHON

EGIT PHRASE 2 PROJECT2222.csv - phrase 2 - Visual Studio ...

No Config

RASE 2 PROJECT2222.csv

EGIT PHRASE 2 PROJECT2222.csv > data

Locals
> special variables
> function variables
> class variables
> data =
    ...

WATCH

CALL STACK   name 'df' is ...

<module> project...

```
1  Date,Market_Share (%),Retention Rate,Process ID
2  2/9/2023,0.78,21.3,P001,AI Weekly Process,11,0.
3  9/9/2023,1.39,20.6,P001,AI Weekly Process,15,0.
4  16/09/2023,1,18.3,P001,AI Weekly Process,11,0.6
5  23/09/2023,0.97,20.6,P001,AI Weekly Process,11,
6  30/09/2023,1.16,19.9,P001,AI Weekly Process,13,
7  7/10/2023,1.34,20,P001,AI Weekly Process,14,0.6
8  14/10/2023,1.26,21.3,P001,AI Weekly Process,13,
```

PROBLEMS 90   OUTPUT   ···   Code

2\python\project3.py"

[Done] exited with code=0 in 9.649 seconds

PYTHON CODING CODES

```python
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score

# Load and preprocess the dataset
df = pd.read_csv('EGIT PHRASE 2 PROJECT2222.csv')
df['Date'] = pd.to_datetime(df['Date'], format='%d/%m/%Y')
df['Profit'] = df['Projected Revenue ($)'] - df['Projected Expenses
df['Net ROI'] = (df['Profit'] / df['Projected Expenses ($)']) * 100
```

```python
# PIE CHART of Market Share Distribution
plt.figure(figsize=(8, 6))
df.groupby('Process Name')['Market_Share (%)'].sum().plot.pie(autop
plt.title('Market Share Distribution by Process Name')
plt.ylabel('')
plt.show()

# BAR CHART for Average Revenue per Process
plt.figure(figsize=(10, 6))
sns.barplot(x='Process Name', y='Projected Revenue ($)', data=df, c
plt.title('Average Revenue by Process Name')
plt.xticks(rotation=45)
plt.show()
```

```python
# EDA: Basic statistics and correlation heatmap
numeric_df = df.select_dtypes(include='number')  # Keep only numeri
sns.heatmap(numeric_df.corr(), annot=True, cmap='coolwarm')
plt.title('Correlation Heatmap')
plt.show()
# HISTOGRAM of Satisfaction Score
plt.figure(figsize=(8, 6))
sns.histplot(df['Satisfaction Score (1-10)'], bins=10, kde=True)
plt.title('Histogram of Satisfaction Score')
plt.xlabel('Satisfaction Score')
plt.ylabel('Frequency')
plt.show()
```

```python
# TIME SERIES PLOT of Projected Revenue Over Time
plt.figure(figsize=(12, 6))
plt.plot(df['Date'], df['Projected Revenue ($)'], marker='o')
plt.title('Projected Revenue Over Time')
plt.xlabel('Date')
plt.ylabel('Projected Revenue ($)')
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()

# Feature Selection and Train-Test Split
X = df[['Market_Share (%)', 'Retention Rate', 'Error Rate (%)',
        'Resource Utilizations (%)', 'Satisfaction Score (1-10)',
        'Penetration Rate (%)', 'ROI (%)', 'Budget Allocation ($)']
```

```python
# Feature Selection and Train-Test Split

X = df[['Market_Share (%)', 'Retention Rate', 'Error Rate (%)',
        'Resource Utilizations (%)', 'Satisfaction Score (1-10)',
        'Penetration Rate (%)', 'ROI (%)', 'Budget Allocation ($)']
y = df['Projected Revenue ($)']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size

# Model Training
model = LinearRegression()
model.fit(X_train, y_train)
```

```python
# Predictions and Evaluation
y_pred = model.predict(X_test)
print(f"R^2 Score: {r2_score(y_test, y_pred)}")
print(f"RMSE: {mean_square_error(y_test, y_pred, squared=False)}")



#EDA: Generates a correlation matrix heatmap for variable relations


#3. Feature Selection: Selects Market_Share (%) as the dependent va


#4. Model Training: Splits the data into training and testing sets,


#5. Evaluation: Calculates Mean Squared Error and R-squared.
```

ANALYSIS RESULTS USING PIVOT TABLE

ANALYSIS SUMMARY TABLE

SUMMARY OF SUM OF BUSINESS REVENUE AND EXPENSES

PROCESS ID	OF MARKE	Rention Rate	Error Rate (%)	Resource Utilizatio	Satisfaction Score (1-10)	Penetration Rate (%)	Sum of Duration (Days)	PROCESS ID	Projected Revenue ($)	Sum of Projected Expenses ($)	Sum of ROI (%)	Budget Allocation ($)
P001	16.31	320.4	11.52	358	42.4	14.57	201	P001	66,716	46,807	71	23,634
P002	3.03	60	2.01	66	7.3	3.45	33	P002	14,348	7,146	14	4,403
P003	4.77	100.9	3.83	106	13.9	5.45	68	P003	26,931	16,620	26	5,867
P004	4.8	100.6	3.46	116	11	4.21	65	P004	19,629	20,182	19	8,268
P005	0.82	21.2	0.56	20	3.4	0.71	13	P005	4,833	3,851	4	1,587
P006	5.82	100	3.57	118	13	5.85	65	P006	22,543	18,601	20	6,808
P007	4.53	75.7	2.8	87	10.7	4.55	47	P007	15,315	14,813	19	6,355
P008	3.39	59.8	2.45	69	6.7	2.21	36	P008	12,789	11,250	10	4,351
P009	2.57	40.1	1.44	44	4.2	2	26	P009	10,181	6,670	10	2,957
P010	3.15	60.1	2.27	66	6.4	3.34	37	P010	12,718	11,194	11	3,819
P011	2.91	59.7	1.79	67	7.7	3.68	42	P011	14,223	12,275	14	5,787
P012	4.27	82.6	3.28	87	10.3	3.9	47	P012	18,695	15,827	17	7,185
P013	3.04	65.2	2.77	69	7.2	3.41	34	P013	11,221	11,633	11	41,021
Grand Total	59.41	1146.3	41.75	1273	144.2	57.33	714	Grand Total	250,142	196,869	246	122,042

DESCRIPTIVE ANALYSIS

S/N	STASTICAL RESULTS	Market_Share (%)	Retention Rate	Satisfaction Score (1-10	Projected Revenue ($)	ROI (%)
1	Mean	1.04228	20.11053	2.52982	4388.46	4.31579
2	Standard Error	0.03506	0.14300	0.07425	103.81162	0.12802
3	Median	1.02	20	2.6	4427	4
4	Mode	1	21.5	2.8	4020	4
5	Standard Deviation	0.2647	1.0796	0.5606	783.7605	0.9665
6	Sample Variance	0.0701	1.1656	0.3143	614,280.5	0.9342
7	Kurtosis	-0.8328	-1.1337	-1.0950	-0.9018	-0.9080
8	Skewness	0.0355	-0.0637	-0.1814	-0.0158	0.1771
9	Range	0.95	3.7	2	2748	3
10	Minimum	0.54	18.2	1.5	3011	3
11	Maximum	1.49	21.9	3.5	5759	6
12	Sum	59.41	1146.3	144.2	250142	246
13	Count	57	57	57	57	57
14	Largest(1)	1.49	21.9	3.5	5759	6
15	Smallest(1)	0.54	18.2	1.5	3011	3
16	Confidence Level(95	0.07024	0.28646	0.14875	207.95966	0.25646

CORRELATION

	Market_Share (%)	Retention Rate	Satisfaction Score (1-10)	Projected Revenue ($)	ROI (%)
Market_Share (%)	1				
Retention Rate	-0.040446836	1			
Satisfaction Score (1	-0.253629482	0.013929069	1		
Projected Revenue (	0.085783261	0.102740612	-0.126598791	1	
ROI (%)	0.042497704	-0.275331806	0.130610264	0.051736743	1

IMPACT OF PROJECTED ON BUSINESS VARIABLES

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.174622945
R Square	0.030493173
Adjusted R Square	-0.024384572
Standard Error	793.2587889
Observations	57

ANOVA

	df	SS	MS	F	Significance F
Regression	3	1048956.311	349652.1	0.555656	0.646622002
Residual	53	33350753.83	629259.5		
Total	56	34399710.14			

| STASTICAL RESULTS	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	3037.056728	2124.436074	1.429583	0.158705	-1224.022419	7298.135876	-1224.022419	7298.135876
Market_Share (%)	182.3064456	414.258751	0.440079	0.66167	-648.5913852	1013.204276	-648.5913852	1013.204276
Retention Rate	77.53015983	98.26627504	0.78898	0.433639	-119.5670278	274.6273475	-119.5670278	274.6273475
Satisfaction Score (1-10)	-157.2391238	195.4827826	-0.80436	0.424781	-549.3279322	234.8496845	-549.3279322	234.8496845

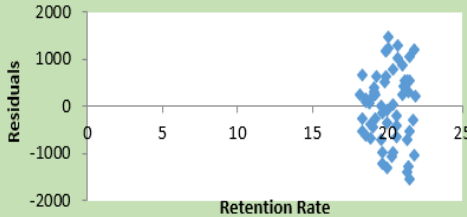IMPACT OF PROJECTED REVENUE ON BUSINESS VARIABLE (REGRESSION)
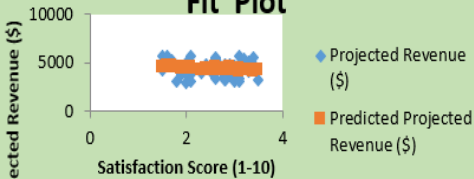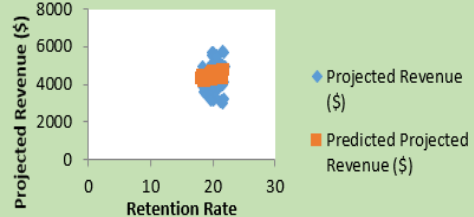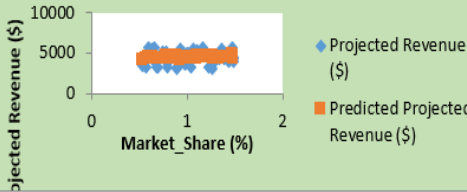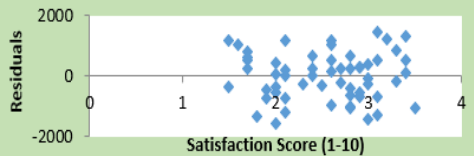
IMPACT OF RETURN ON INVESTMENT (ROI) ON BUSINESS VARIBLES

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.327758373
R Square	0.107425551
Adjusted R Square	0.038765978
Standard Error	0.94762595
Observations	57

ANOVA

ANOVA RESULT	df	SS	MS	F	Significance F
Regression	4	5.620052518	1.40501313	1.56461	0.197581337
Residual	52	46.69573696	0.897994941		
Total	56	52.31578947			

STASTICAL RESULTS	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	7.969845033	2.586316195	3.08154318	0.00329	2.780021903	13.1597	2.780021903	13.1596682
Market_Share (%)	0.233918729	0.495776324	0.471823113	0.63903	-0.76092925	1.22877	-0.760929249	1.22876671
Retention Rate	-0.255048609	0.118076127	-2.160035354	0.0354	-0.49198569	-0.0181	-0.491985692	-0.0181115
Satisfaction Score (1-10)	0.281032706	0.234944536	1.196166167	0.23706	-0.190418	0.75248	-0.190417998	0.75248341
Projected Revenue ($)	0.000118569	0.000164091	0.722580346	0.47318	-0.0002107	0.00045	-0.000210703	0.00044784

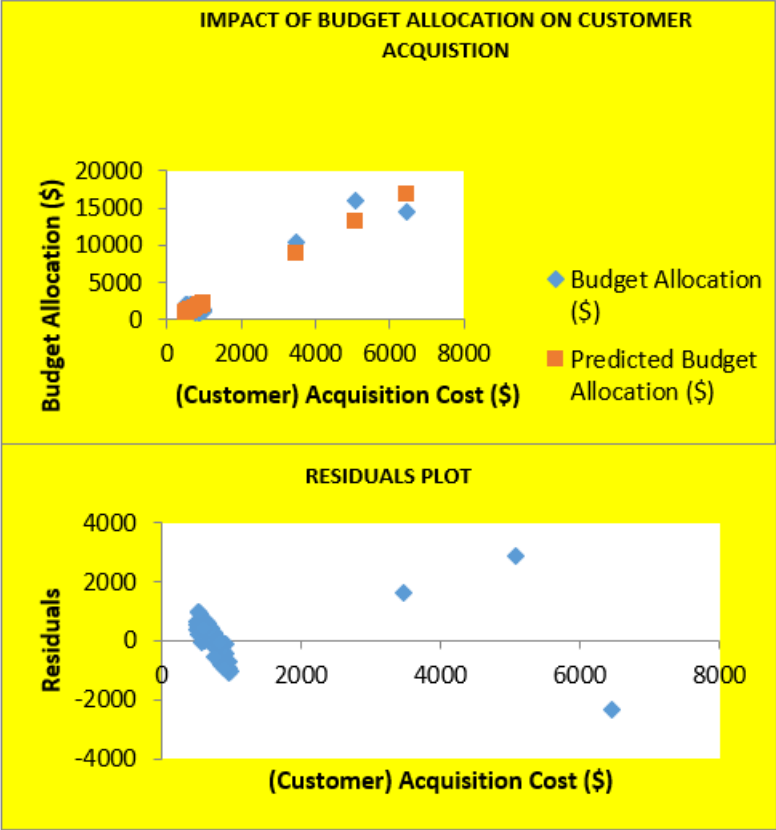IMPACT OF ROI ON BUSINESS VARIABLE (REGRESSION)
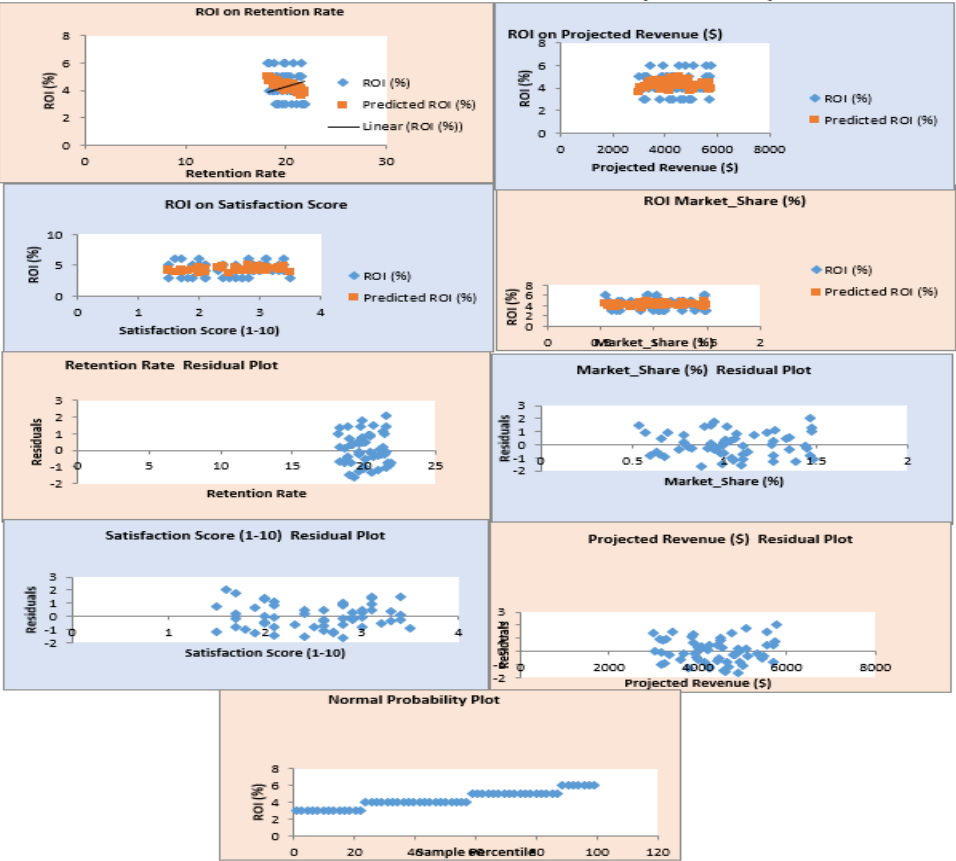
INFLUENCE BUDGETED ALLOCATION ON CUSTOMERS ACQUISTION COST

SUMMARY OUTPUT

Regression Statistics	
Multiple R	▼ 0.961985016
R Square	▼ 0.925415171
Adjusted R Square	▼ 0.924059083
Standard Error	▲ 774.6133967
Observations	▼ 57

ANOVA

	df	SS	MS	F	Significance F
Regression	▶ 1	▶ 409466913.3	▶ 409466913	▶ 682.4154	▶ 1.106E-32
Residual	▶ 55	▶ 33001425.29	▶ 600025.91		
Total	▶ 56	▶ 442468338.6			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	▼ -442.642778	▲ 142.5102625	▲ -3.1060414	▲ 0.002997	▼ -728.2397	⇨ -157.0458
(Customer) Acquisition C	▲ 2.679535649	▲ 0.102573491	▲ 26.123081	▲ 1.11E-32	▲ 2.4739738	▲ 2.8850975

IMPACT OF BUDGET ALLOCATION ON CUSTOMER ACQUISTION

Budget Allocation ($)
Predicted Budget Allocation ($)
(Customer) Acquisition Cost ($)

RESIDUALS PLOT
Residuals
(Customer) Acquisition Cost ($)

HISTOGRAM CHART FROM PYTHON CODING
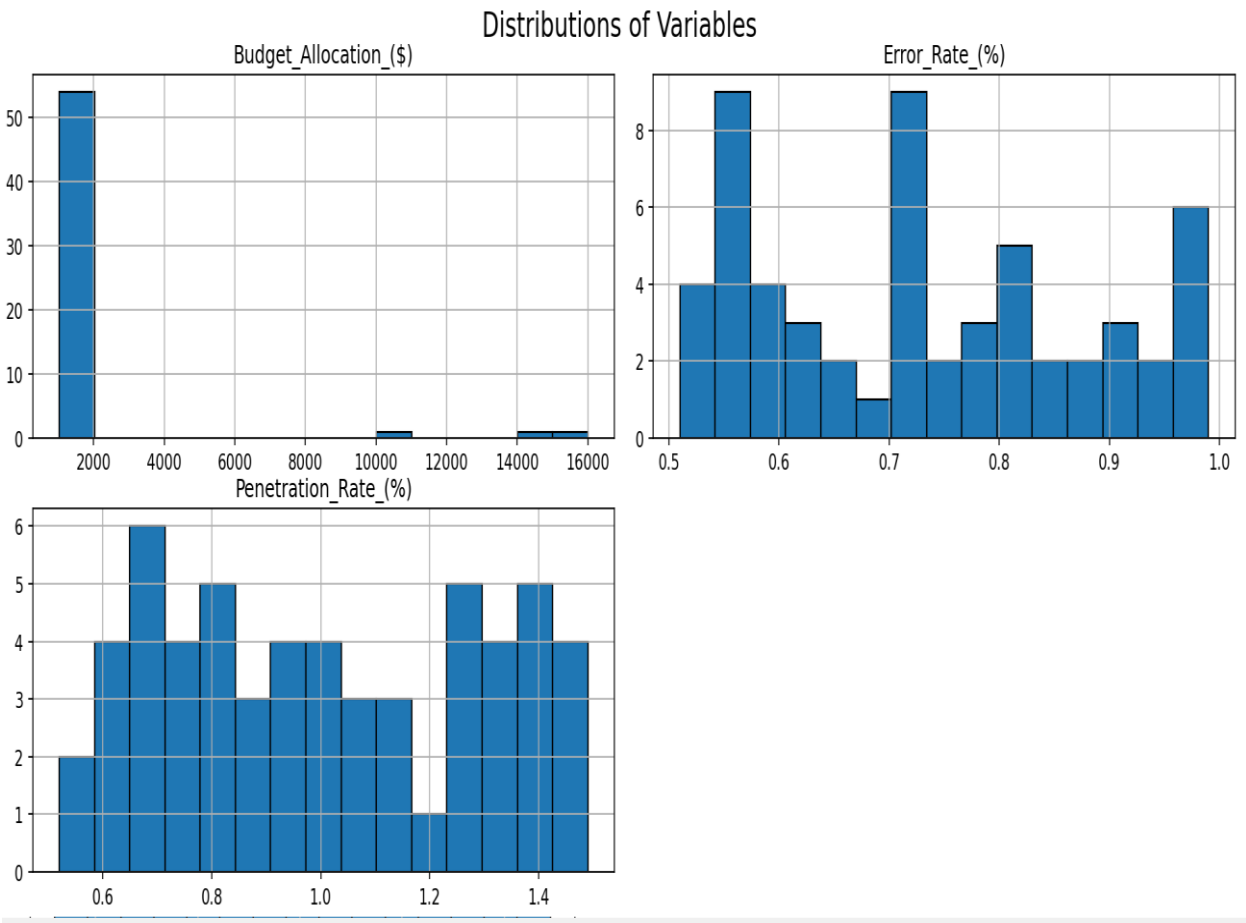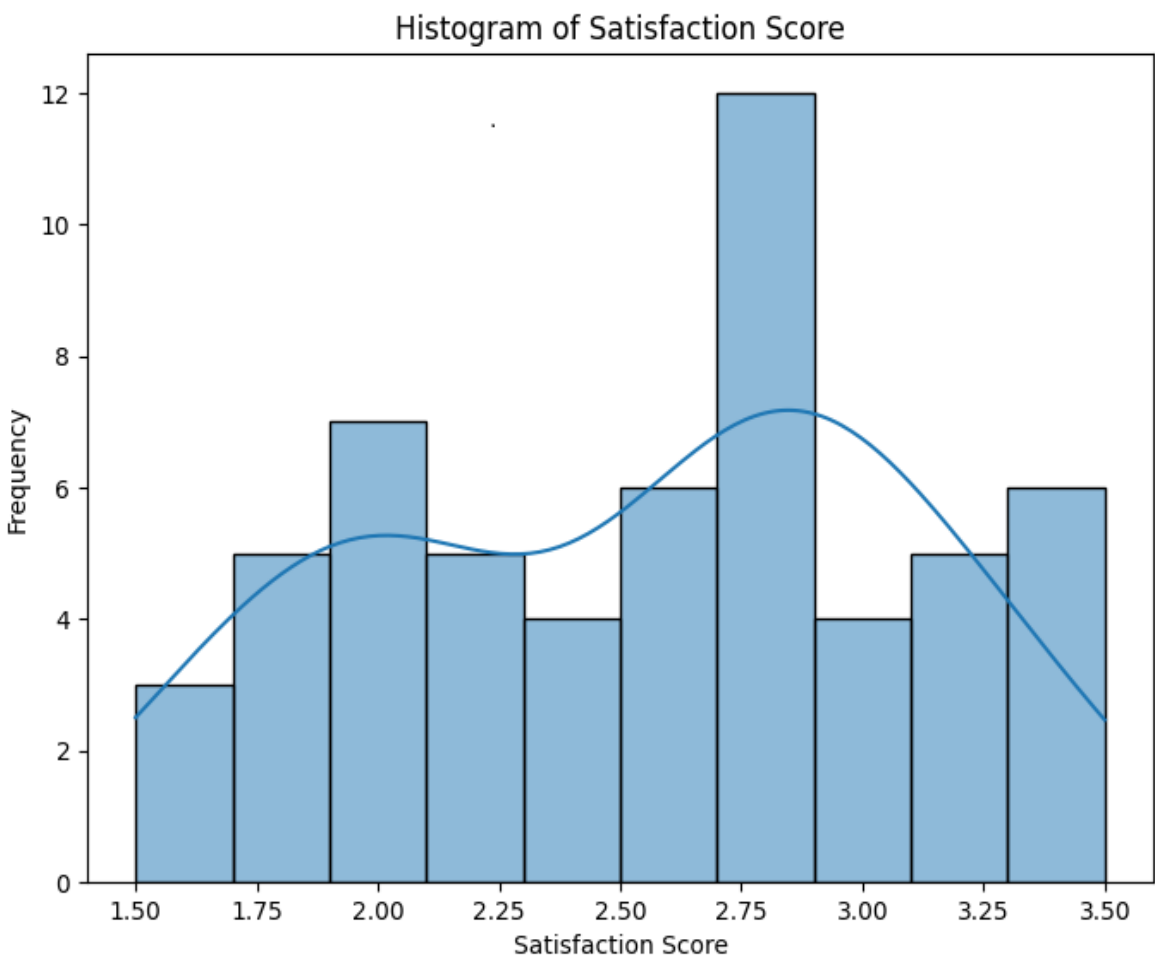
PYTHON CORRELATION HEATMAP RESULT

Correlation Heatmap
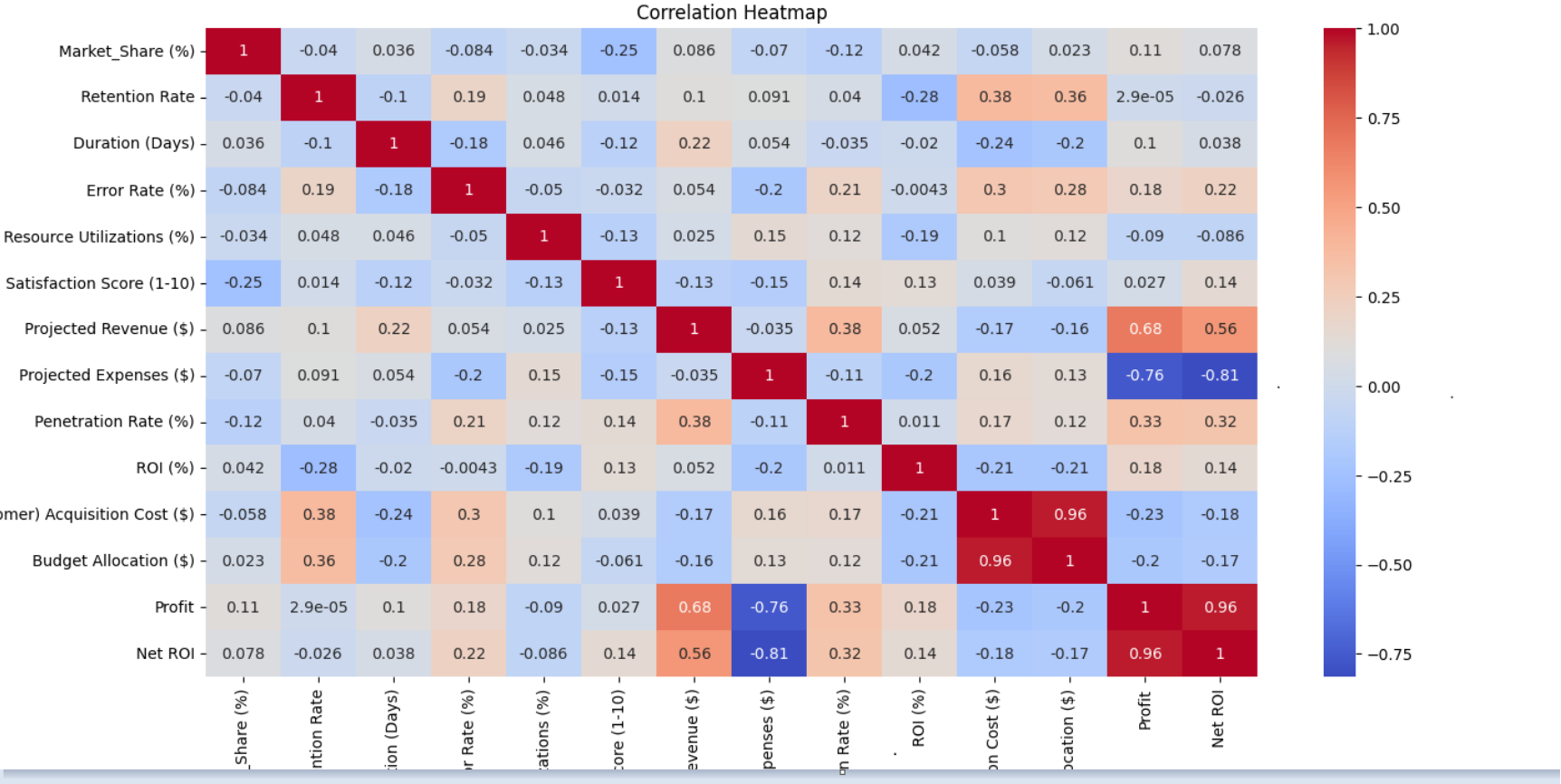
Market Share vs Projected Revenue

Projected Revenue Over Time

Name: Projected Revenue ($), dtype: int64

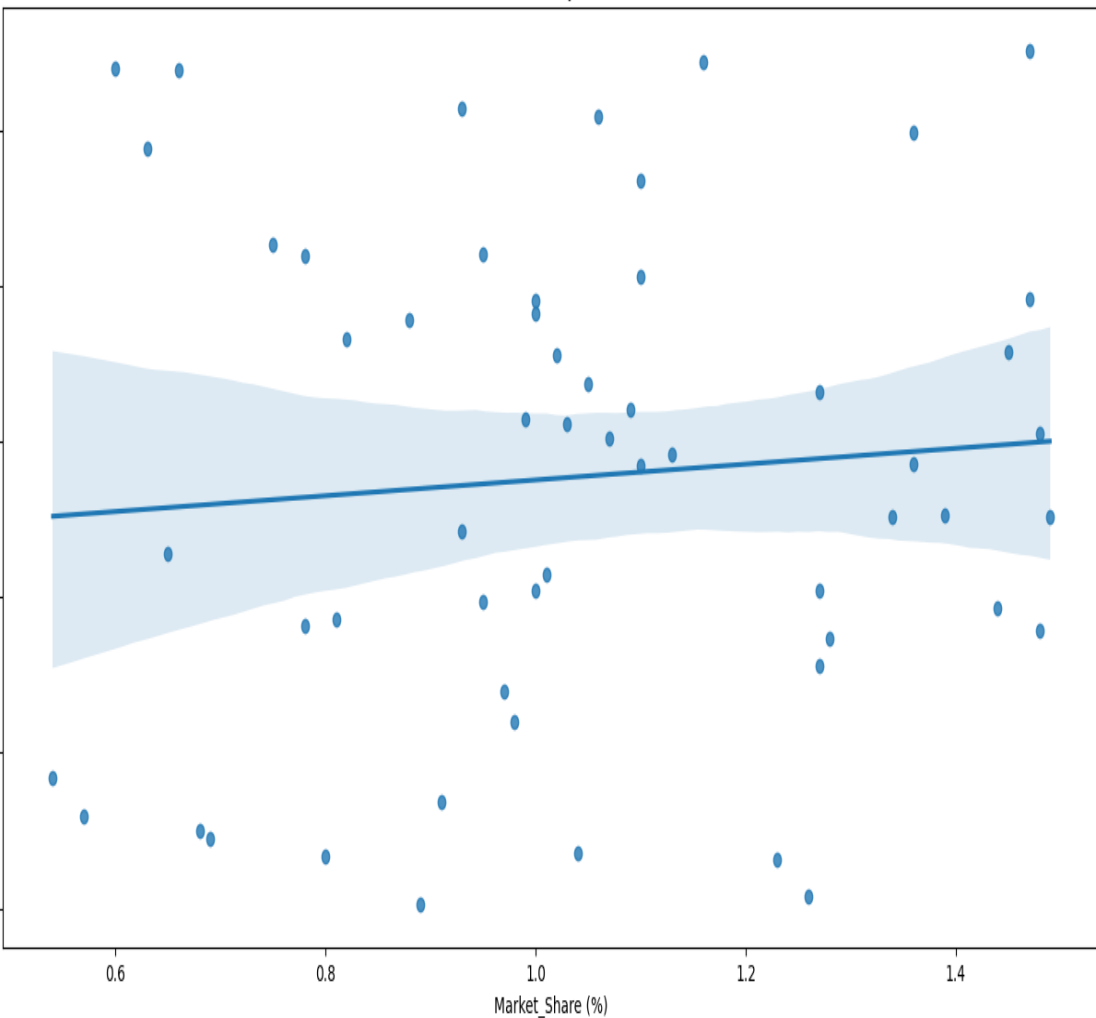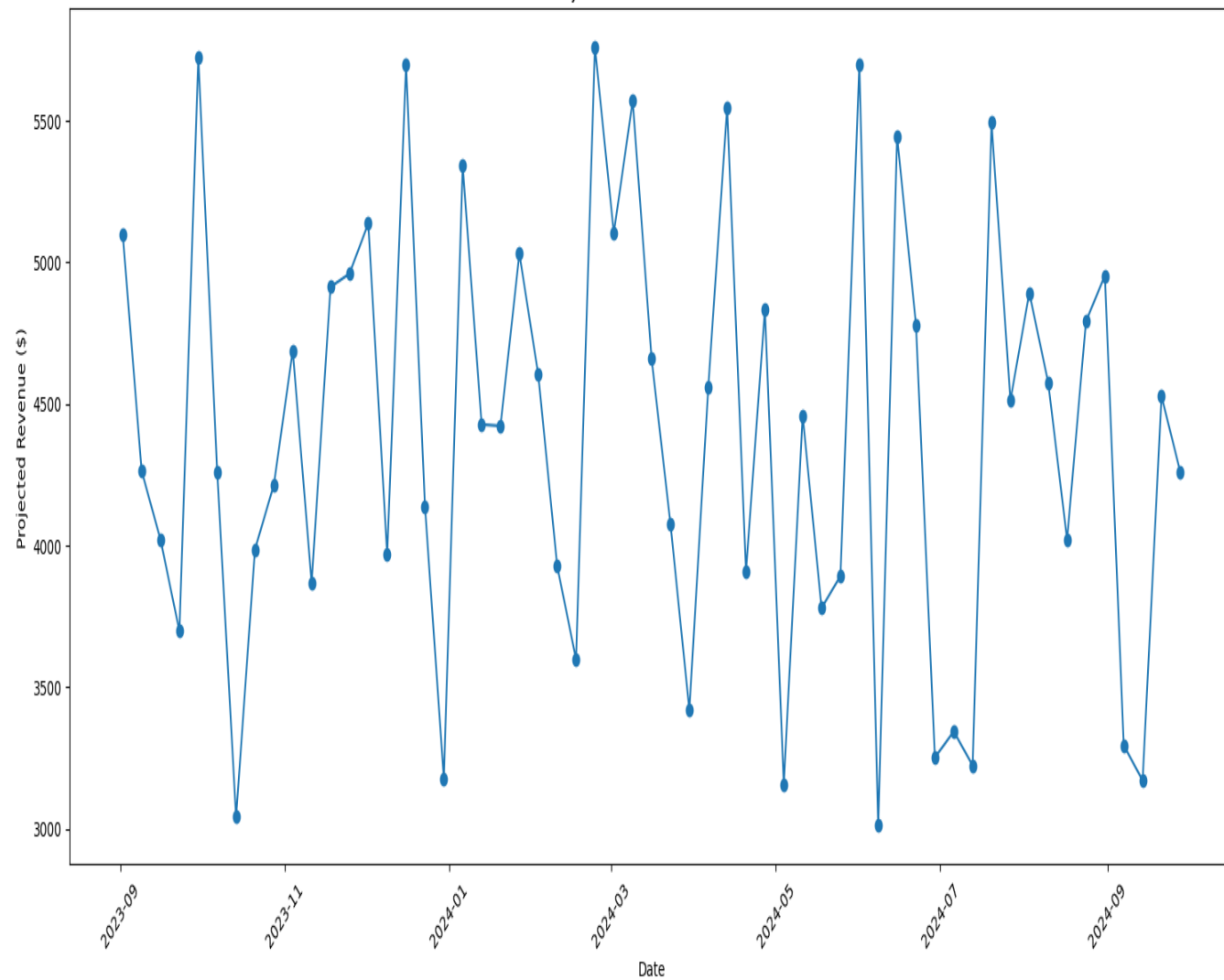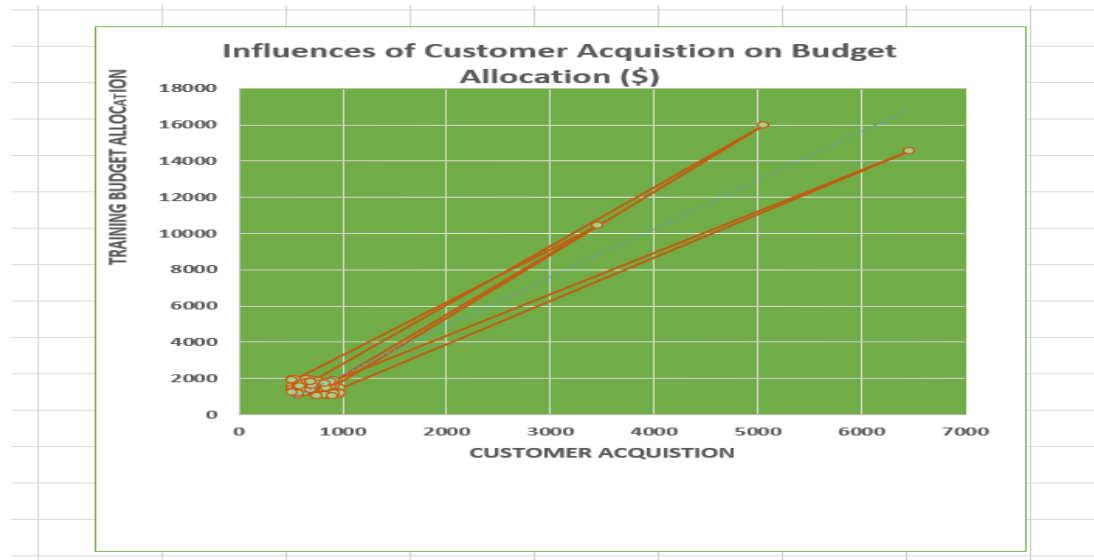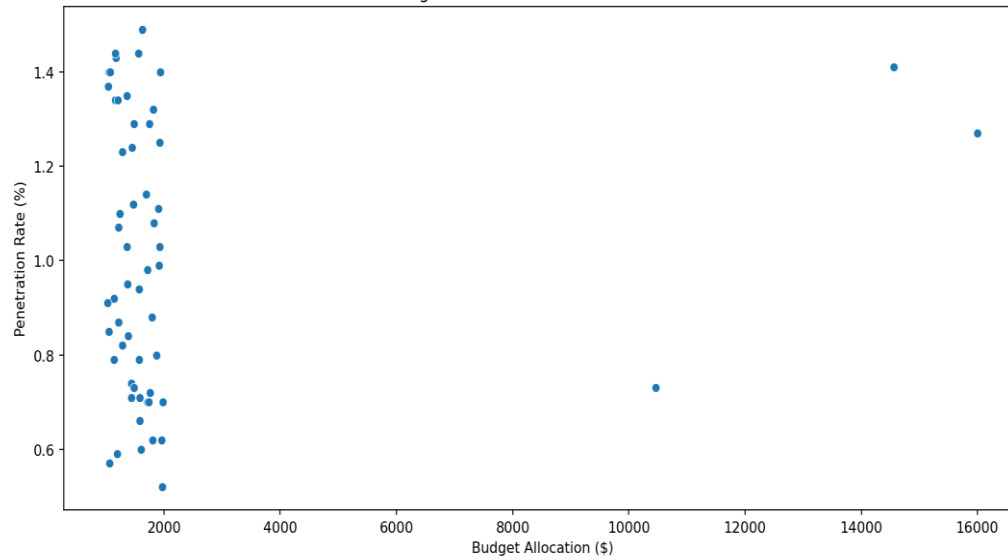|	Market Share (%)	Retention Rate	...	ROI (%)	Budget Allocation ($)
0	0.78	21.3	...	4	1480
1	1.39	20.6	...	3	1907
2	1.00	18.3	...	4	1586
3	0.97	20.6	...	4	1280
4	1.16	19.9	...	5	1218
5	1.34	20.0	...	5	1357
6	1.26	21.3	...	4	1142
7	0.95	18.9	...	4	1442
8	0.93	18.6	...	5	1361
9	1.05	21.0	...	3	1746
10	1.28	21.3	...	5	1926
11	1.00	18.3	...	5	1921
12	1.47	21.9	...	3	16000
13	0.75	21.0	...	4	1561
14	1.44	21.5	...	4	1979
15	0.66	20.1	...	5	1240
16	0.65	21.7	...	3	1757
17	1.04	20.0	...	3	1868
18	1.10	20.4	...	4	1218
19	1.36	19.6	...	5	1440
20	1.10	18.6	...	4	1136
21	1.10	21.5	...	3	1051
22	1.09	19.2	...	3	1717

23	0.81	20.6 ...	4	1059
24	0.98	18.6 ...	4	1710
25	1.47	21.5 ...	6	1821
26	0.95	19.9 ...	6	1485
27	0.93	20.7 ...	6	1285
28	1.27	19.1 ...	4	1973
29	1.01	19.7 ...	5	1196
30	0.54	18.9 ...	6	1452
31	1.03	19.1 ...	5	1172
32	1.06	19.9 ...	5	1069
33	0.78	19.0 ...	5	1162
34	0.82	21.2 ...	4	1587
35	1.23	21.4 ...	5	1383
36	1.13	18.8 ...	4	1368
37	1.27	19.6 ...	3	1606
38	1.48	18.3 ...	6	1953
39	0.60	21.8 ...	3	1692
40	0.89	21.5 ...	5	10465
41	0.63	20.1 ...	4	1940
42	1.02	19.8 ...	6	1055
43	0.68	21.8 ...	3	14556
44	0.91	19.7 ...	4	1800
45	0.69	20.3 ...	5	1910
46	1.36	20.7 ...	4	1623
47	1.07	20.4 ...	5	1475
48	0.88	19.3 ...	3	1161
49	0.99	19.0 ...	3	1201
50	1.27	19.2 ...	5	1044
51	1.45	21.4 ...	4	1732
52	1.00	21.1 ...	4	1574
53	0.57	20.4 ...	5	1024

REGRESSION CHART
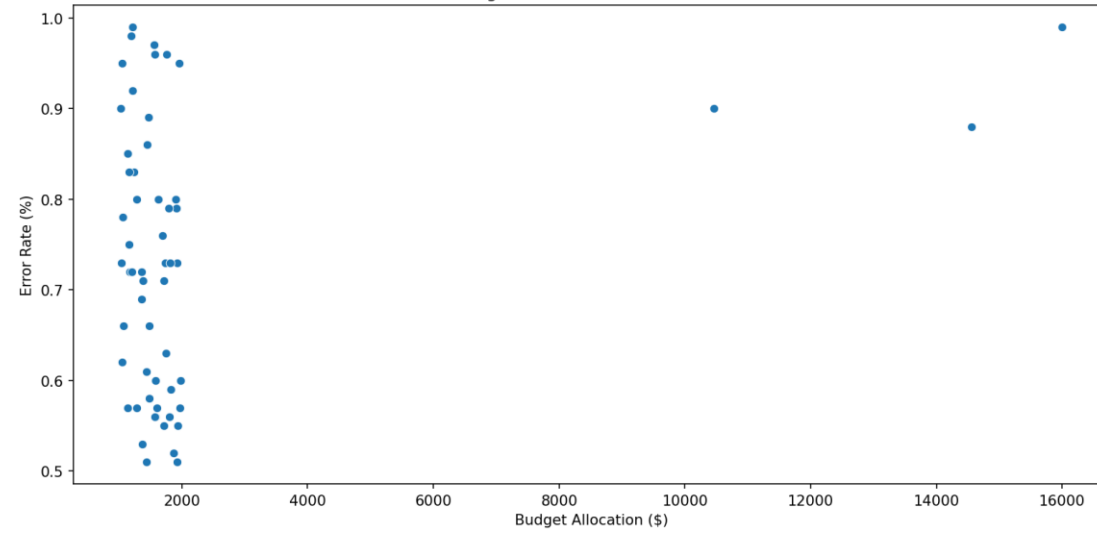

Influences of Customer Acquisition on Budget Allocation ($)

Budget Allocation vs. Penetration Rate

Budget Allocation vs. Error Rate

```
RangeIndex: 57 entries, 0 to 56
Data columns (total 15 columns):
 #   Column                          Non-Null Count  Dtype
---  ------                          --------------  -----
 0   Date                            21 non-null     datetime64[ns]
 1   Market_Share (%)                57 non-null     float64
 2   Retention Rate                  57 non-null     float64
 3   Process ID                      57 non-null     object
 4   Process Name                    57 non-null     object
 5   Duration (Days)                 57 non-null     int64
 6   Error Rate (%)                  57 non-null     float64
 7   Resource Utilizations (%)       57 non-null     int64
 8   Satisfaction Score (1-10)       57 non-null     float64
 9   Projected Revenue ($)           57 non-null     int64
 10  Projected Expenses ($)          57 non-null     int64
 11  Penetration Rate (%)            57 non-null     float64
 12  ROI (%)                         57 non-null     int64
 13  (Customer) Acquisition Cost ($) 57 non-null     int64
 14  Budget Allocation ($)           57 non-null     int64
dtypes: datetime64[ns](1), float64(5), int64(7), object(2)
memory usage: 6.8+ KB
```
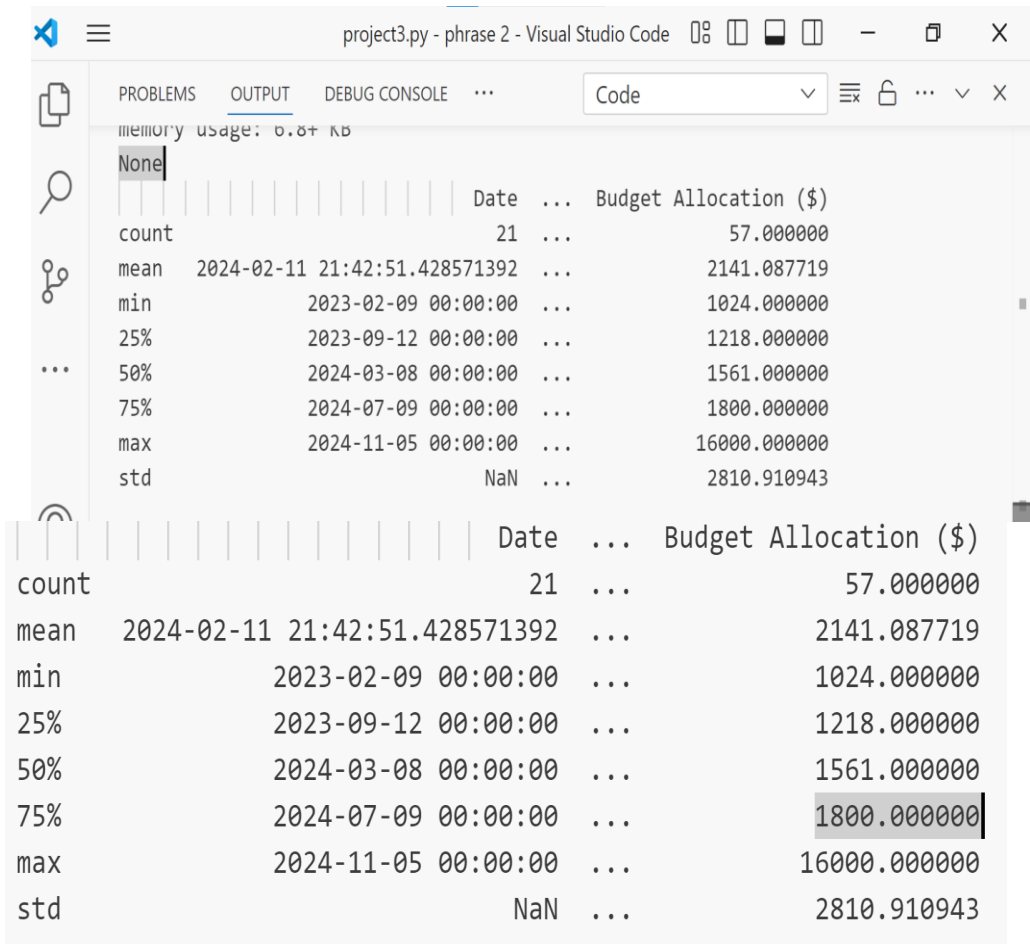
ANALYSIS RESULTS USING PYTHON

```
memory usage: 6.8+ KB
None
                      Date  ...  Budget Allocation ($)
count                   21  ...              57.000000
mean   2024-02-11 21:42:51.428571392  ...       2141.087719
min           2023-02-09 00:00:00  ...       1024.000000
25%           2023-09-12 00:00:00  ...       1218.000000
50%           2024-03-08 00:00:00  ...       1561.000000
75%           2024-07-09 00:00:00  ...       1800.000000
max           2024-11-05 00:00:00  ...      16000.000000
std                    NaN  ...       2810.910943
```

```
                      Date  ...  Budget Allocation ($)
count                   21  ...              57.000000
mean   2024-02-11 21:42:51.428571392  ...       2141.087719
min           2023-02-09 00:00:00  ...       1024.000000
25%           2023-09-12 00:00:00  ...       1218.000000
50%           2024-03-08 00:00:00  ...       1561.000000
75%           2024-07-09 00:00:00  ...       1800.000000
max           2024-11-05 00:00:00  ...      16000.000000
std                    NaN  ...       2810.910943
```

```
[8 rows x 13 columns]
Mean Squared Error: 0.11730437563820961
R-squared: -0.3691896873578222
                                         Coefficient
Retention Rate                              0.027320
Duration (Days)                            -0.017641
Error Rate (%)                             -0.250018
Resource Utilizations (%)                  -0.016029
Satisfaction Score (1-10)                  -0.078910
Projected Revenue ($)                       0.000005
Projected Expenses ($)                     -0.000060
Penetration Rate (%)                       -0.082044
ROI (%)                                     0.012875
(Customer) Acquisition Cost ($)            -0.000104
Budget Allocation ($)                       0.000024
```

ELITE GLOBAL INTELLIGENCE TECNOLOGY BUSINESS PERFORMANCE DASHBOARD

ELITE GLOBAL INTELLIGENCE TECHNOLOGIES

ERROR RATE	PENETRATION RATE	RETENTION RATE	ROI (%))	RESOURCE UTILIZATION
41.75	57.33	1.15K	246	1273

INFLUNCE OF ROI (%) BY MARKET SHARE (%)

Sum of ROI (%)

Market_Share (%)

0.5 — 1.0 — 1.5

10

5

0
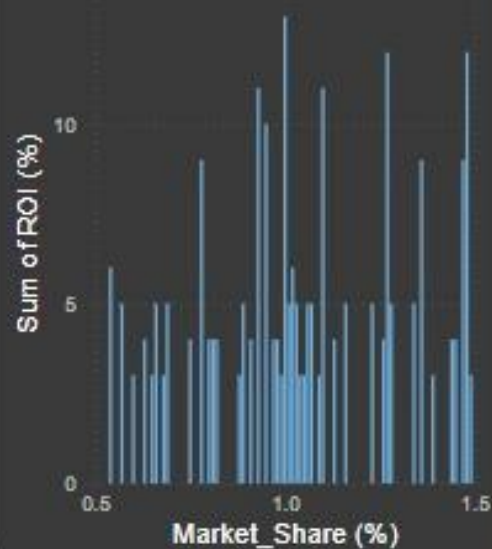
INFLUENCE OF ROI (100%) ON CUSTOMER RENTION & SATISFACTION RATE

Sum of R... Sum of ...

1146

1000

500

246
144

0

YEARLY PROJECTED REVENUE

Sum of Projected Revenue ($)

30K
27K
20K
10K
10K
8K
4K
4K
0K
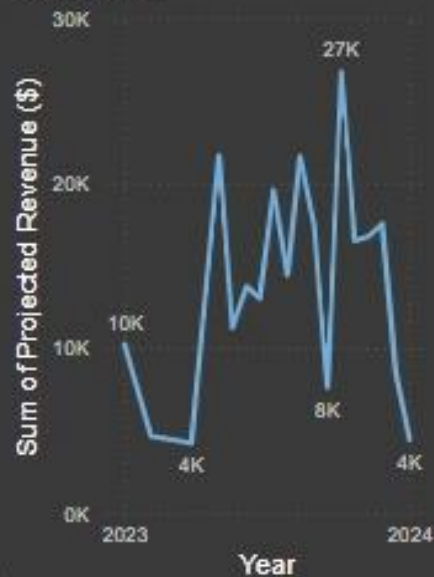
2023 — 2024

Year

PROPORTION OF YEARLY PROJECTED EXPENSES
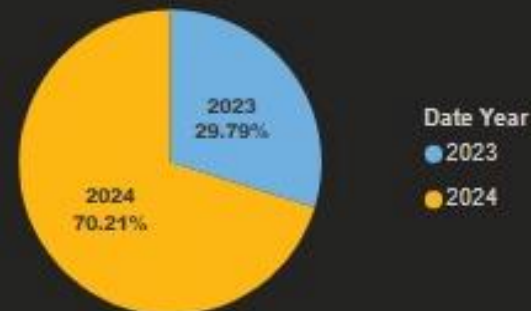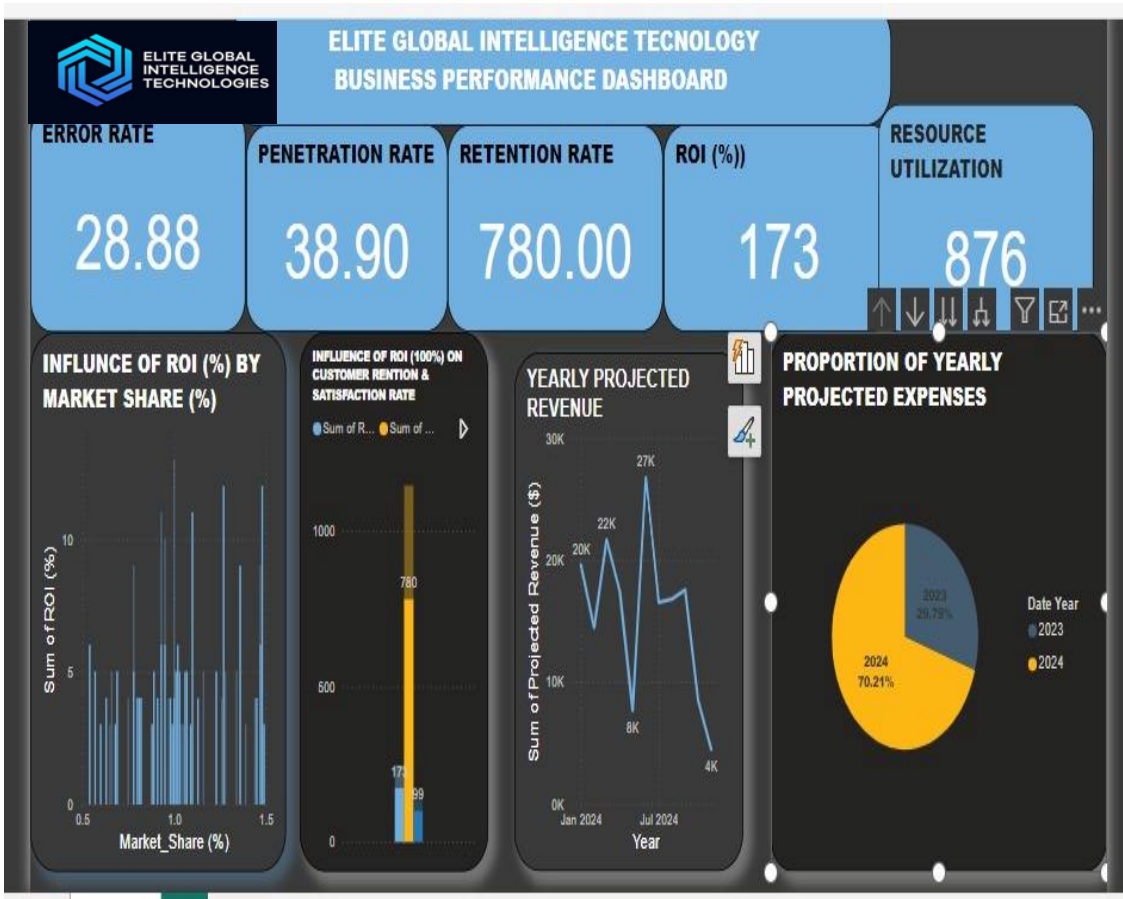
2023
29.79%

2024
70.21%
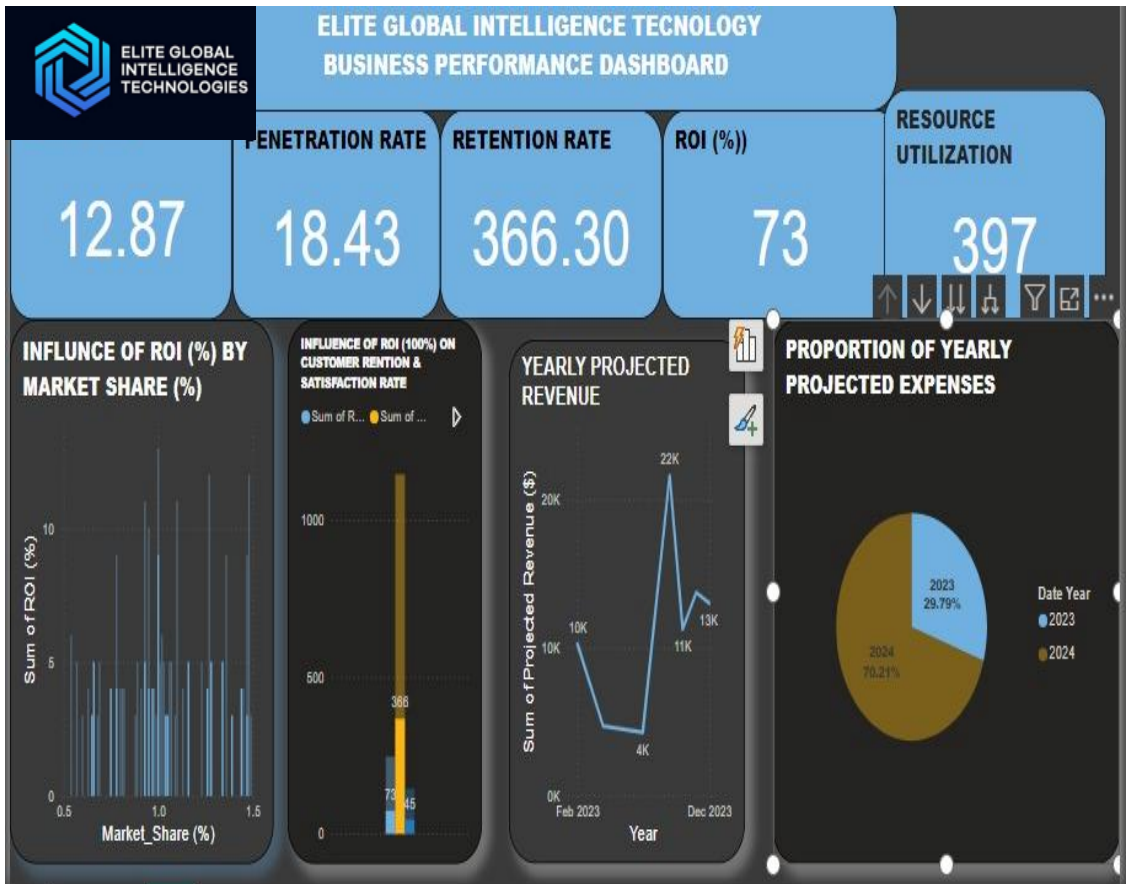
Date Year
● 2023
● 2024

2023 VERSUS 2024 BUSINESS PERFORMANCE

INSIGHTS

❖ <mark>RENTATION RATE</mark>: Despite a small positive impact on ROI (0.027, not statistically significant), historical data suggests that higher retention rates correlate with consistent revenue streams.

However, the regression analysis indicates a statistically significant negative impact (-0.255, P-value: 0.035), highlighting the need for better retention strategies.

❖ <mark>MARKET SHARE</mark>: The correlation analysis shows a weak positive correlation with ROI (0.042), although the regression model doesn't find it statistically significant. Improving market share could potentially benefit overall performance.

❖ <mark>SATISFACTION SCORE</mark>: Though a positive relationship is suggested by the descriptive statistics, the variable doesn't show a statistically significant impact in the regression analysis (0.281, P-value: 0.237).

❖ <mark>PROJECTED REVENUE</mark>: Weak positive correlation with ROI (0.052), but the regression model doesn't highlight a significant impact (0.0001, P-value: 0.473).

❑ Key Negative Impact Factors:
  ✓ **Duration (Days):** A negative impact (-0.018), suggesting that longer project timelines might be detrimental to business performance.

  ✓ **Error Rate (%):** Strongly negative impact (-0.250), indicating that errors significantly harm overall performance.

  ✓ **Resource Utilizations (%):** Negative impact (-0.016), pointing to potential inefficiencies in resource use.

  ✓ **Projected Expenses ($):** Negative impact (-0.000060), showing that higher expenses reduce performance.

✓**Penetration Rate (%): Negative impact (-0.082), suggesting that higher penetration rates might not be beneficial in the current context.**

✓**Customer Acquisition Cost ($): Negative impact (-0.000104), implying that high acquisition costs lower overall performance.**

✓**Budget Allocation ($)**: Minimal but positive impact (0.000024), indicating that increasing budget allocation, especially towards impactful initiatives like training, can improve performance.

COMPREHENSIVE RECOMMENDATIONS

1. **Enhance Customer Retention Initiatives:**

   o **Loyalty Programs: Implement comprehensive loyalty programs to reward and retain customers, fostering long-term relationships.**

   o **Personalized Marketing: Use customer data to tailor marketing campaigns that resonate with individual preferences, improving retention rates.**

   o **Superior Customer Service: Continuously improve customer service quality through regular training and adopting customer feedback.**

2. **Optimize Market Share:**

   o **Competitive Analysis: Conduct thorough market analysis to understand competitor strategies and market trends, identifying new opportunities for growth.**

   o **Innovative Products/Services: Invest in developing new and innovative products or services that meet emerging customer needs, enhancing market share.**

3 **Improve Customer Satisfaction:**

   o **Feedback Mechanisms: Regularly gather customer feedback to identify pain points and areas for improvement.**

   o **Quality Enhancement: Focus on improving product/service quality based on customer feedback to boost satisfaction scores.**

   o **Customer Experience: Invest in creating exceptional customer experiences at every touchpoint.**

4. **Address Negative Impact Factors**:
   - **Streamline Processes**: Reduce project timelines without compromising quality, ensuring efficient completion.
   - **Error Reduction**: Invest in quality control measures and error-reduction strategies to minimize errors and enhance overall performance.
   - **Optimize Resource Utilization**: Use data analytics to optimize resource allocation, ensuring efficient use of resources.
   - **Cost Control**: Implement cost control measures and review expenditures to ensure financial efficiency without compromising quality.
   - **Improve Penetration Strategy**: Re-evaluate market penetration strategies to ensure they align with overall business goals and deliver positive outcomes.
5. **Optimize Customer Acquisition Strategies**:
   - **Cost-Effective Channels**: Focus on acquiring customers through cost-effective channels, optimizing marketing expenditure.
   - **Refine Campaigns**: Continuously refine marketing campaigns based on data analytics to attract high-quality leads at lower costs.
6. **Increase Strategic Budget Allocation**:
   - **Training Programs**: Allocate additional budget towards comprehensive training programs to enhance employee skills and efficiency.
   - **High-Impact Areas**: Focus budget allocation on high-impact areas like marketing, customer experience, and innovation.

7. **Leverage Advanced Data Analytics**:
   - **Continuous Monitoring**: Implement advanced analytics tools to continuously monitor business performance, identifying trends and patterns.

Data-Driven Decisions: Make informed strategic decisions based on data-driven insights, regularly reviewing KPIs and adjusting strategies accordingly

By implementing these comprehensive recommendations, Elite Global Intelligence Technologies can effectively leverage its existing business data to improve customer retention, market share, and ROI, ultimately enhancing overall business performance and strategic decision-making

THANK YOU