FraudFinder Case Study

Assessment of the US FraudFinder Business

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Introduction

Overview of FraudFinder

FraudFinder is a software application designed to help businesses mitigate risks by screening individuals and entities against various risk factors such as previous criminal activity, bankruptcy, and political sensitivity.

Versions:

- **FraudFinder**: Original version with a long presence in the US market.
- **FraudFinder 2.0**: Released 5 years ago with an improved interface and additional functionalities.

Business Model:

Both versions charge an annual subscription fee based on the company's size. For the past three years, a 10% annual price increase has been applied to all customer accounts at renewal.

Problem statement

Objective of the Case Study :

To assess the health of the US Fraud Finder business and determine the optimality of the current business model for potential international expansion.

Key Questions :

1. How well is Fraud Finder performing in the US market?
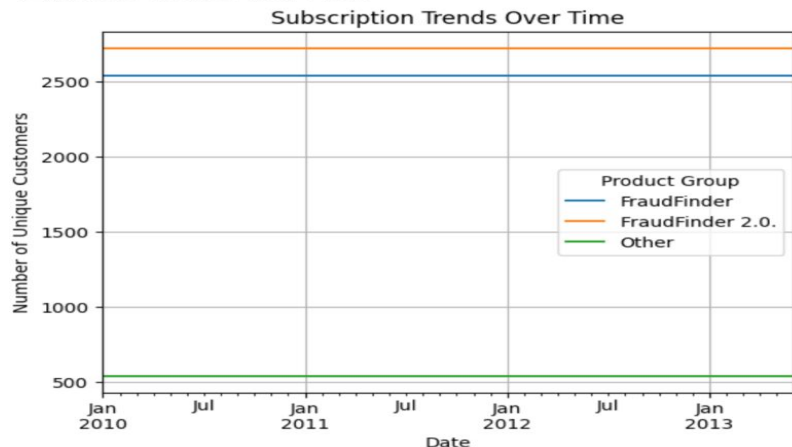2. Are there areas for improvement in the business model?

Subscription Trends Over Time :


```python
# Plot the trends
import matplotlib.pyplot as plt

plt.figure(figsize=(12, 6))
subscription_trends.plot(kind='line')
plt.title('Subscription Trends Over Time')
plt.xlabel('Date')
plt.ylabel('Number of Unique Customers')
plt.legend(title='Product Group')
plt.grid(True)
plt.show()
```
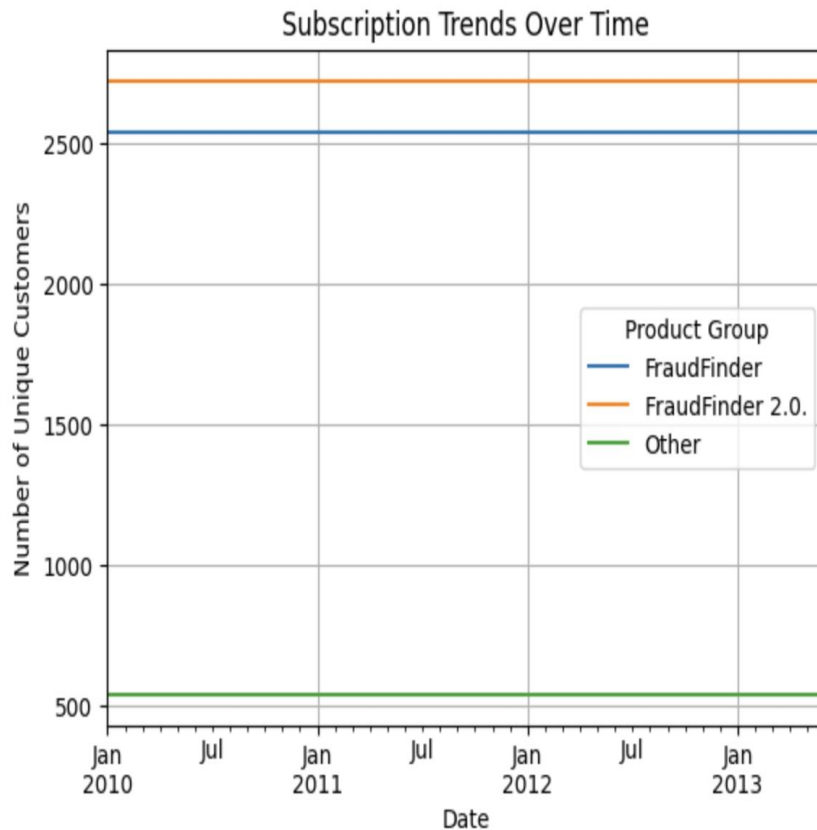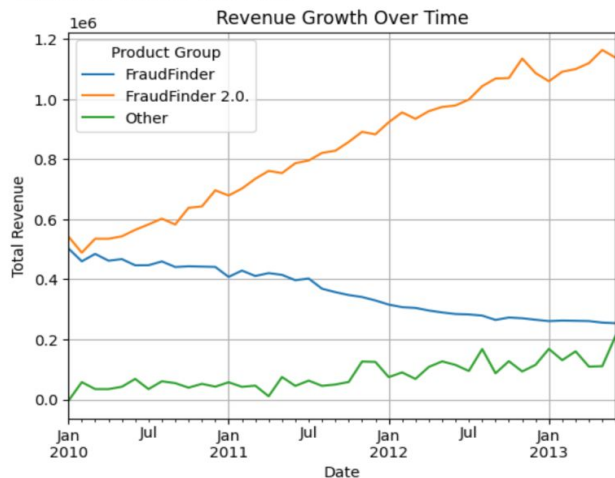
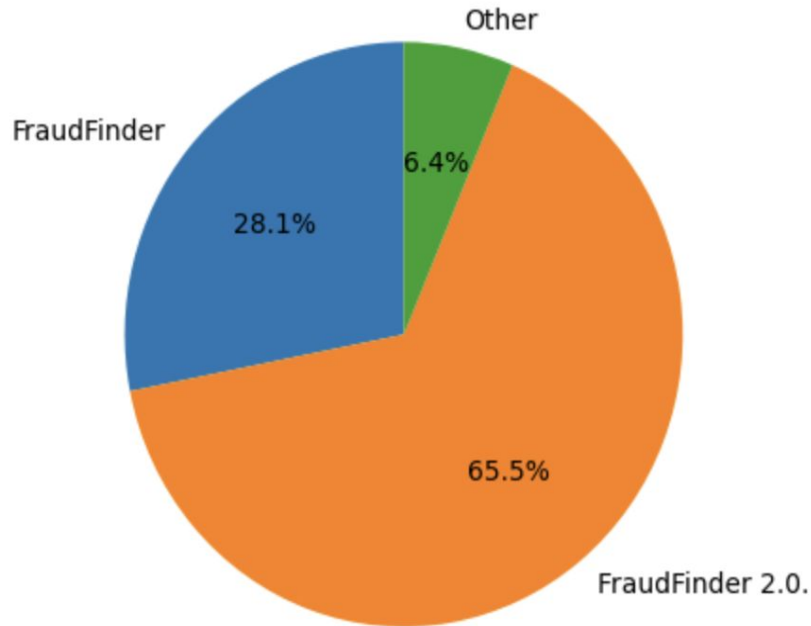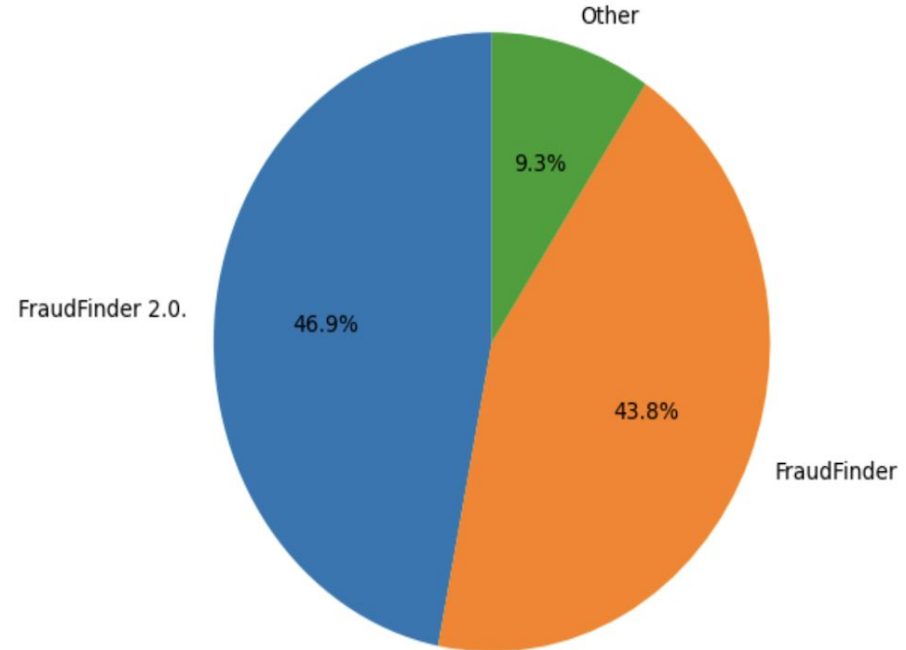# Revenue Growth Over Time :

Revenue Growth Comparison :
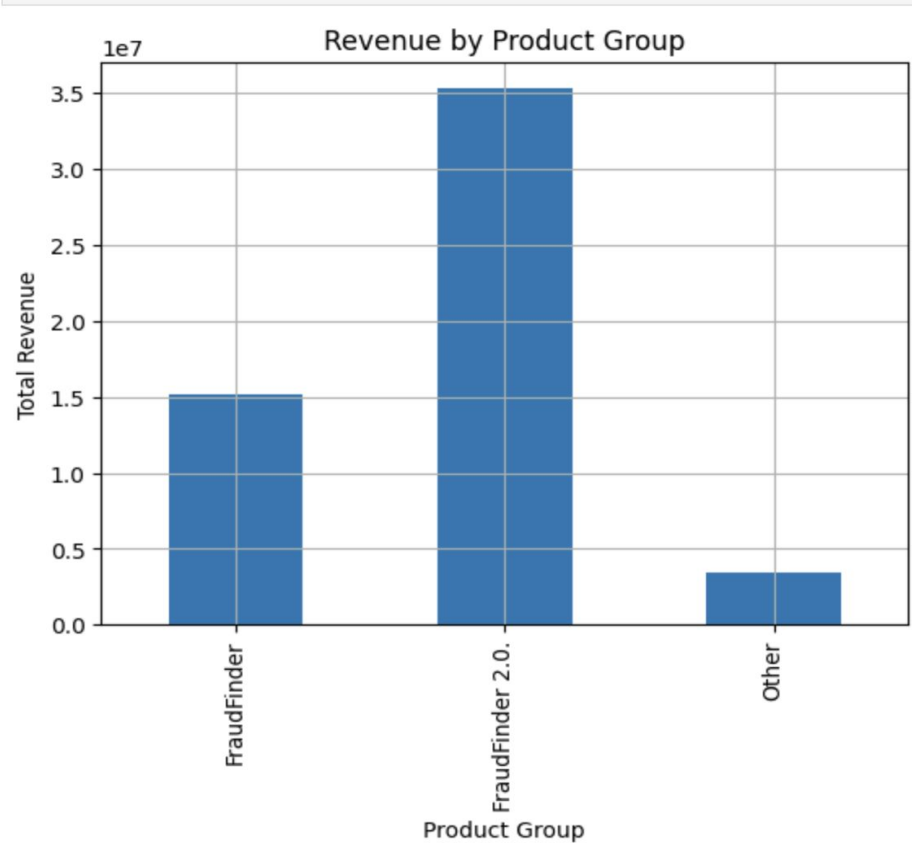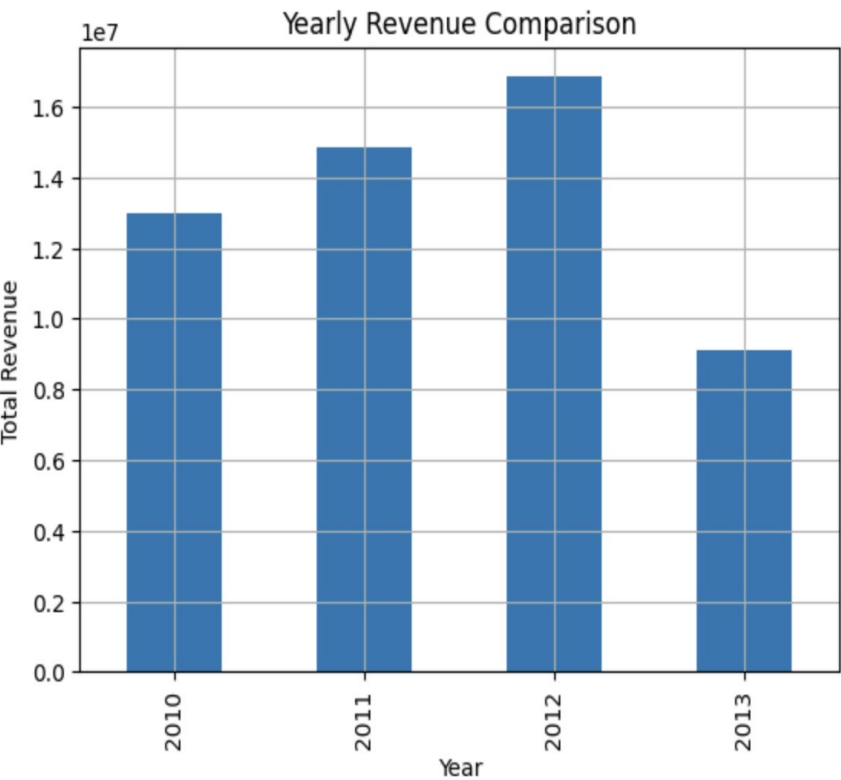
Customer & Revenue Distribution by Product :
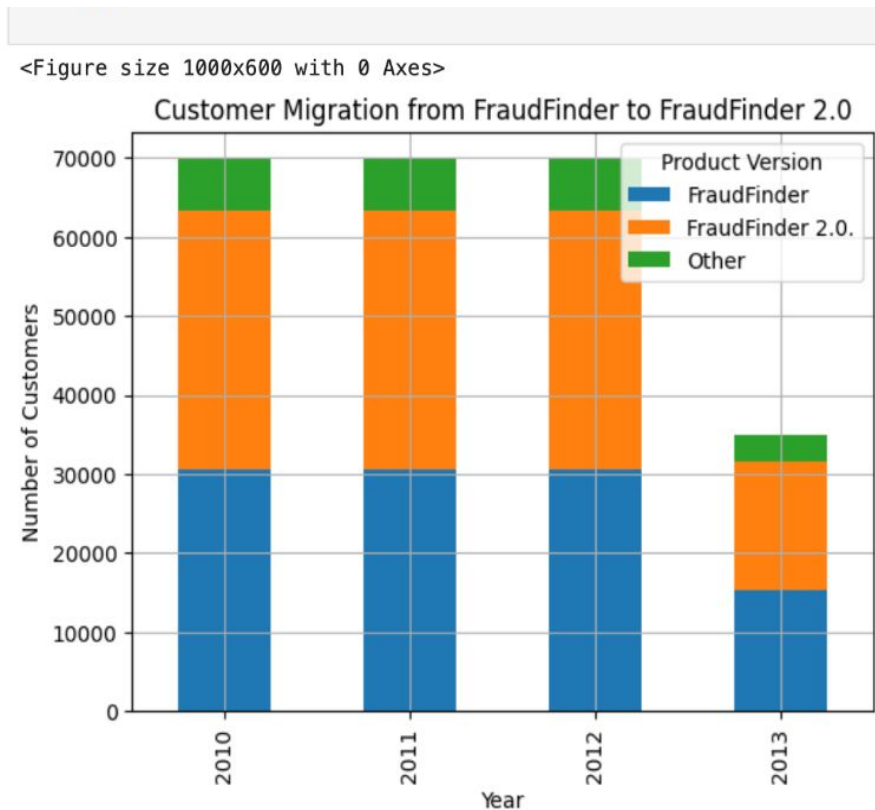

Revenue Distribution by Product Group

Customer Distribution by Product Version

Customer Retention & Acquisition :

Percentage of Customers Using FraudFinder and FraudFinder 2.0 Over Time

<Figure size 1000x600 with 0 Axes>

Customer Migration from FraudFinder to FraudFinder 2.0
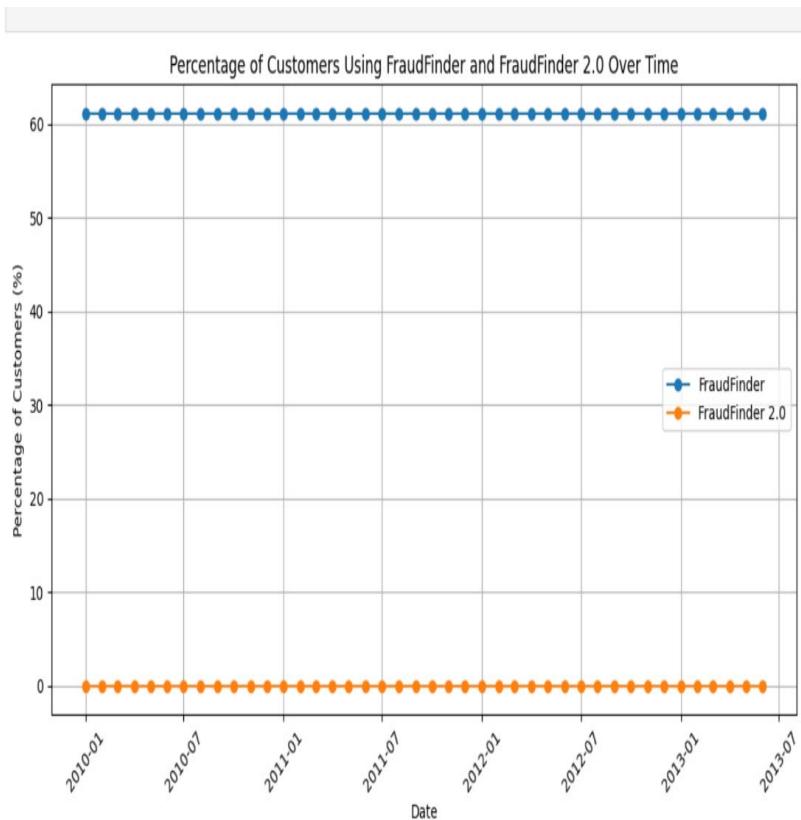
New Customer Acquisition :
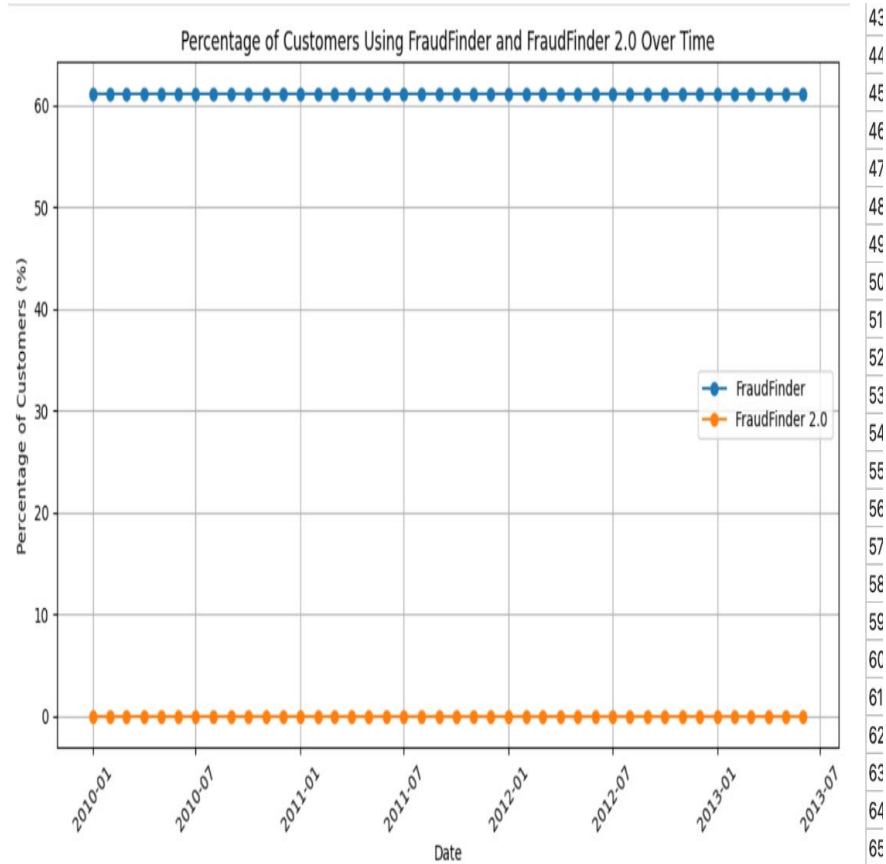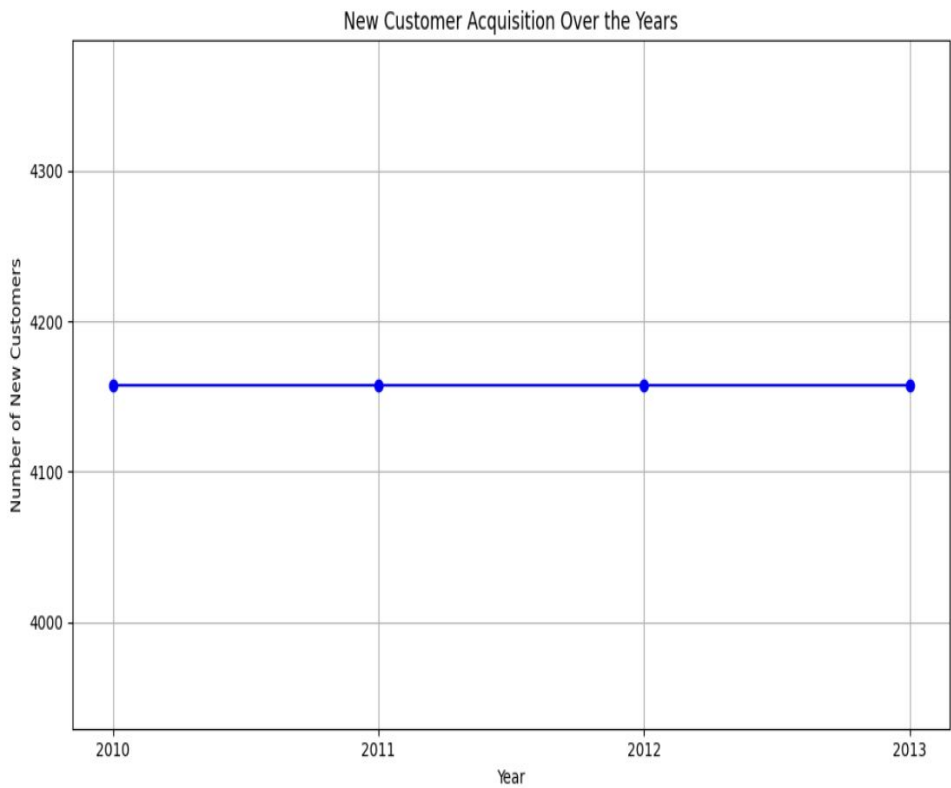
Number of Transaction Over the Years :
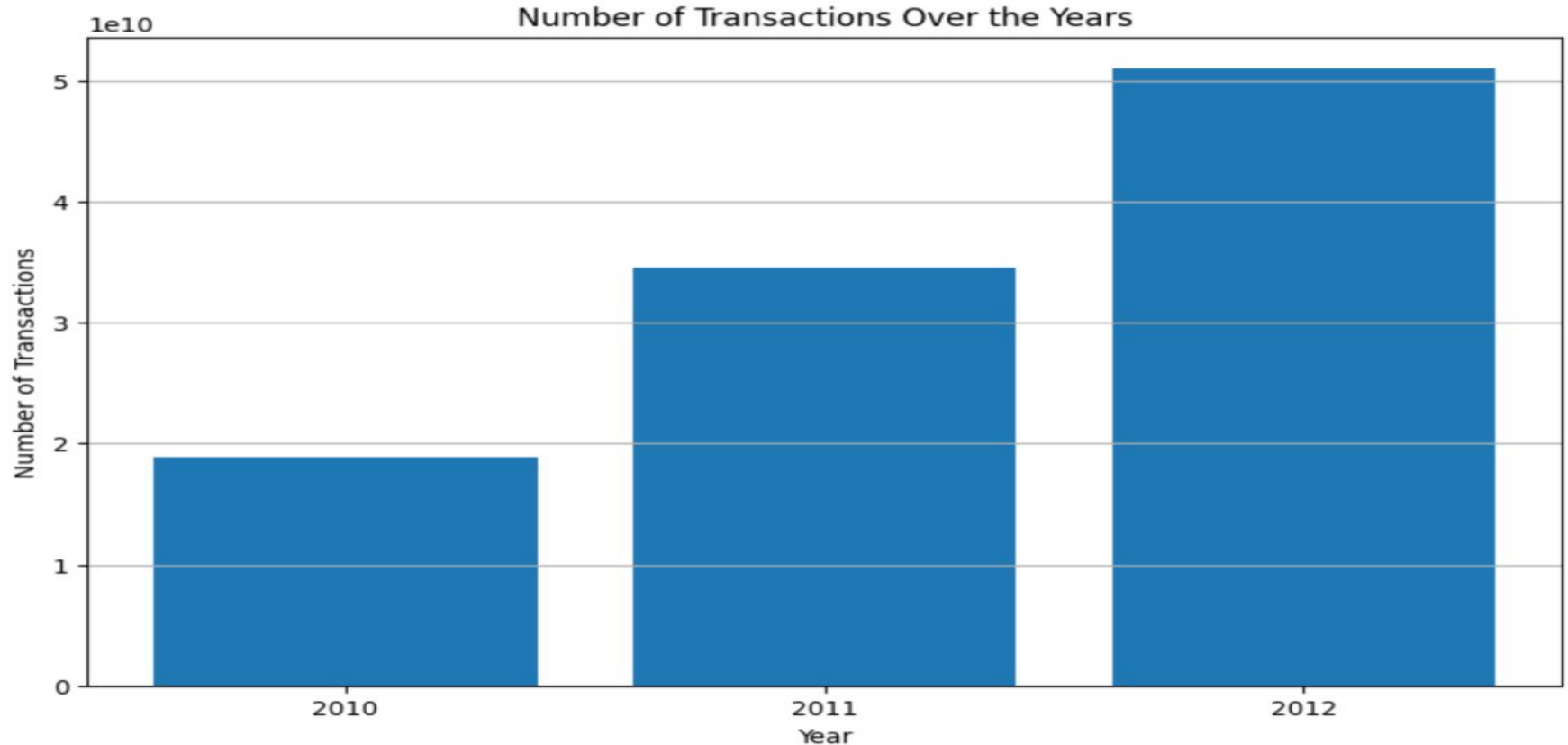
RESULTS

% Change in Revenue Over time:

Percentage Change in Revenue Over Time
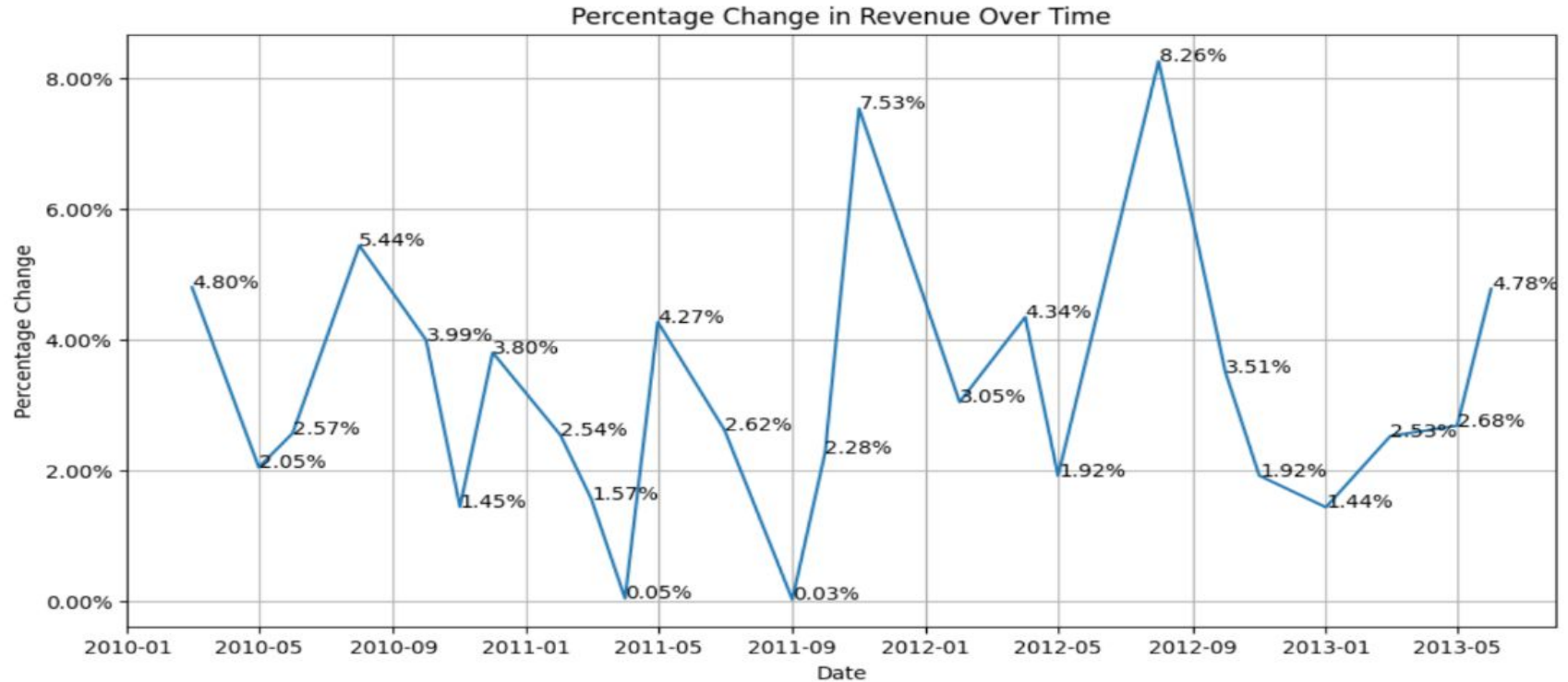
Top 10 Customers by Transaction :

Models :

Three models selected for evaluation : Linear Regression, Random Forest, and Support Vector Machine (SVM).

The performance of each model was evaluated using RMSE as the metric. The RMSE values obtained were as follows:

- Linear Regression RMSE: 692.97
- Random Forest RMSE: 594.56 [Better Model]
- Support Vector Machine RMSE: 768.41

There are more than 60% of customers who are still using FraudFinder.

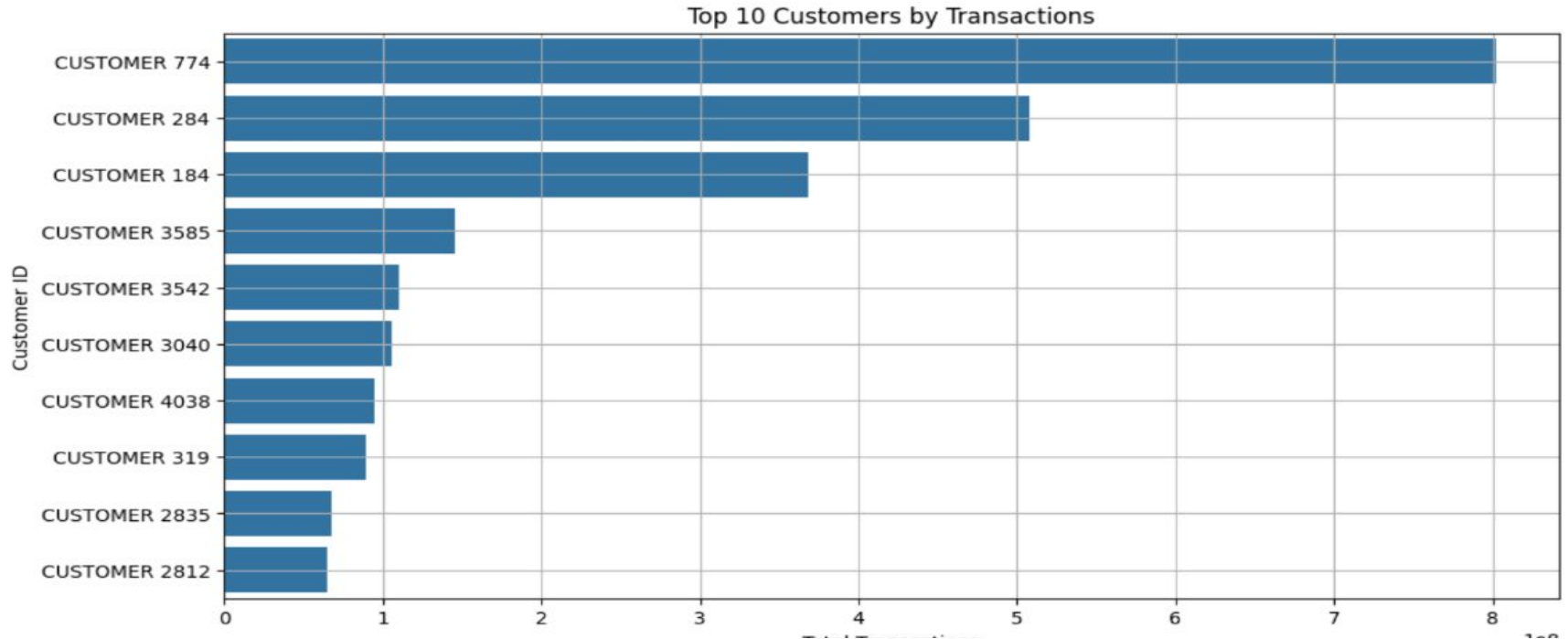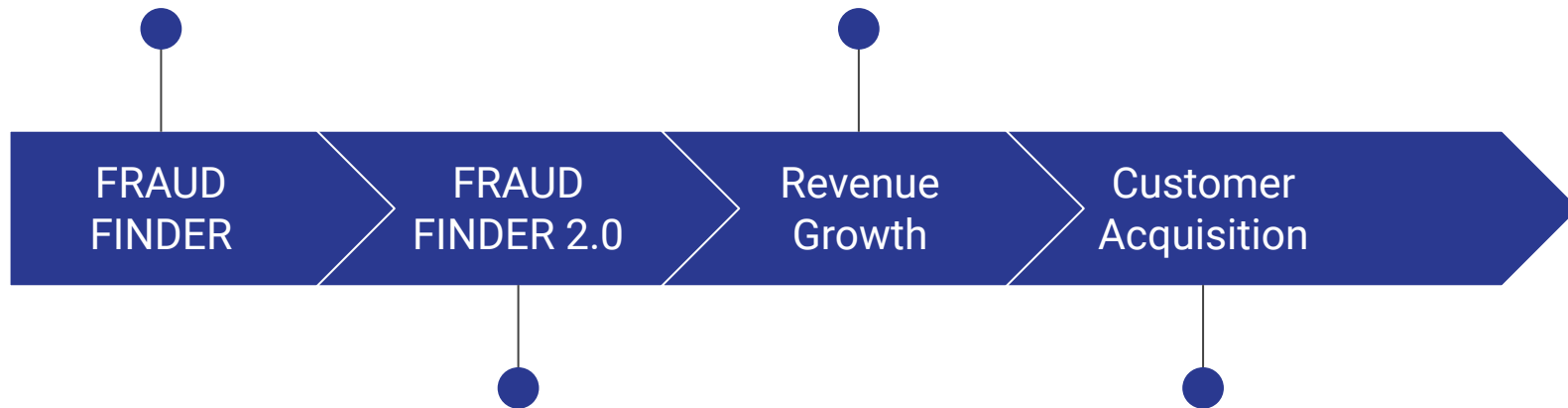In 2012, the revenue further increased to approximately $16.84 million, showing a continued positive trend with an increase of about $1.97 million from 2011.

FRAUD FINDER	FRAUD FINDER 2.0	Revenue Growth	Customer Acquisition

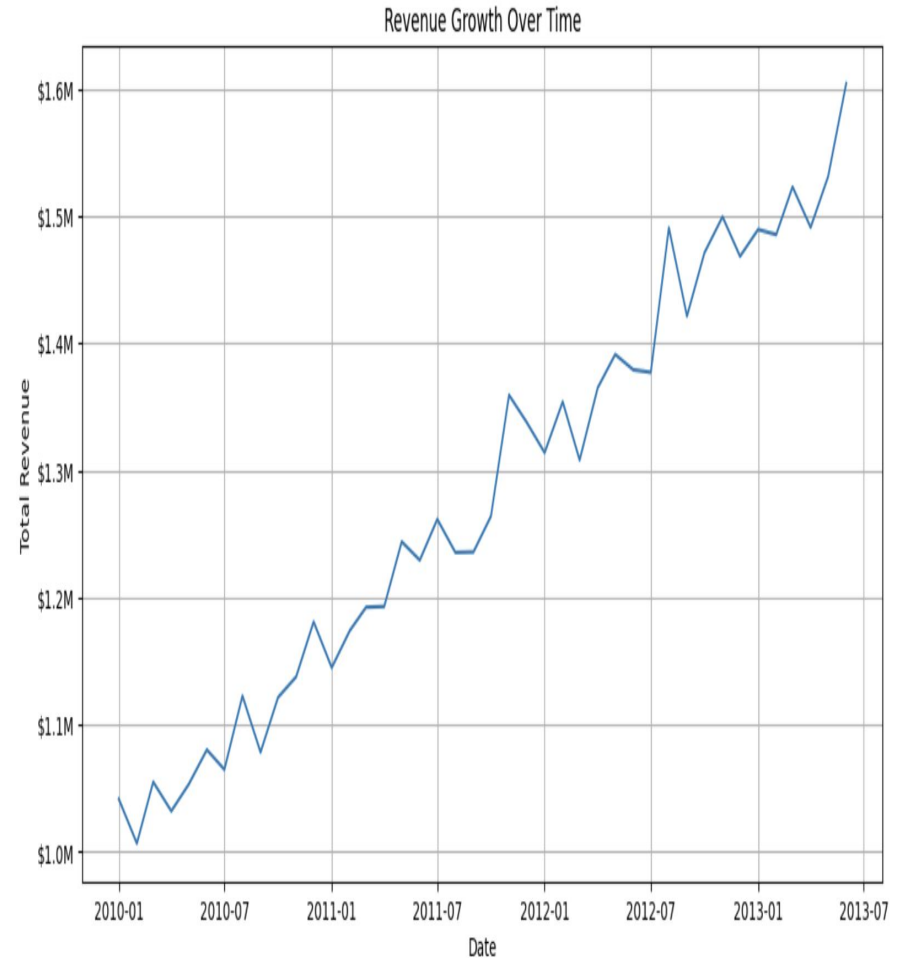There are more than 2900k unique customers who subscribed to fraudfinder 2.0 over time.

Customer acquisition remained steady from 2010 to 2013, with around 4158 new customers acquired each year, showcasing consistent product interest and engagement.

Recommendations :

- **Investment in Customer Service:** Enhance customer service initiatives to address any issues or concerns identified through the analysis, thereby improving customer satisfaction and loyalty.

- **Expansion into New Markets:** Explore opportunities for expansion into new geographic markets or customer segments based on insights into revenue distribution and customer behavior.

- **Improve Product Offerings:** Continuously innovate product offerings based on customer feedback and market trends to meet evolving preferences and stay ahead of competitors.

- **Investment in Technology:** Invest in technology infrastructure and tools to streamline data collection, analysis, and decision-making processes, enabling faster and more accurate insights.

Impact

Over the last six months, there has been a notable increase of approximately 13.33% in revenue.

References

Github Code:

https://github.com/Honey-Dandwani/Fraud Finder-Case-Study/tree/main

Thank you.