

7. Results

7.1 Screenshots (testing phase related)

Vulnerability scanning:



Penetration Testing:



Load Testing:



ADVANTAGES & DISADVANTAGES

Advantages:

- Automated and scalable solution
- High detection accuracy
- Reduces human error

Disadvantages:

- Potential false positives/negatives
 - Requires periodic retraining
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CONCLUSION

This project successfully demonstrates the application of machine learning for phishing detection in financial institutions.

FUTURE SCOPE

- Implementing deep learning techniques
 - Real-time email filtering
 - Integration with banking security systems
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APPENDIX

Source Code

```
# Import necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import MultinomialNB
from sklearn.metrics import classification_report, confusion_matrix, accuracy_score

# Load the dataset
data = pd.read_csv('/kaggle/input/emails/emails.csv')

# Display a sample of the dataset
print(data.head())

# Explore the distribution of the labels
sns.countplot(x='label', data=data)
plt.title('Distribution of Phishing and Legitimate Emails')
plt.show()
```