SOCIAL ENGINEERING SIMULATION FOR CYBERSECURITY AWARENESS

Internship Project Report submitted to
INLIGHN TECH

Submitted by:

Sabnam Banu
B.Tech, Computer Science and Engineering
UPES, Dehradun
Email: sabnam11sab@gmail.com

Under the Guidance of:

Mr. Rishav Patel
Mentor, Inlighn Tech

Duration:

10th September 2025 – 10th November 2025

ACKNOWLEDGMENT

I would like to express my sincere gratitude to Inlighn Tech, my mentor Mr. Raghav Patel, and all participants for their cooperation and feedback. I also extend my heartfelt thanks to UPES, Dehradun – Department of Computer Science & Engineering, for their guidance and support during my internship journey.

Sabnam Banu

ABSTRACT

This project explores how social engineering simulations can be used to measure and improve cybersecurity awareness among users. The study involved sending a harmless phishing-style email to informed participants and analyzing their reactions. The results highlight that while awareness levels were generally high, emotional and urgency-based triggers still led some participants to unsafe actions, emphasizing the importance of continuous awareness training.

TABLE OF CONTENTS

Contents

1. INTRODUCTION

In the modern digital era, cybersecurity threats are not just technical — they often exploit human psychology.
Social engineering is the art of manipulating people into revealing sensitive information or performing unsafe actions.
This project demonstrates a **phishing-style awareness simulation** designed to educate and assess users' responses.
Key Idea:
Realistic, harmless simulations help users recognize phishing red flags in a safe environment.

2. OBJECTIVES

Primary Goals:

- To design an ethical phishing-style email for awareness testing.
- To simulate a real-world social engineering scenario.
- To analyze participant behavior and awareness levels.
- To propose practical recommendations for cybersecurity training.

3. TOOLS & TECHNOLOGIES USED

Tool	Purpose
Google Forms	Collecting feedback responses
Google Sites	Hosting safe landing page
Mailmeteor	Sending emails to participants
Python (pandas, matplotlib)	Data processing and visualization
Canva / MS Word	Documentation & design

4. METHODOLOGY

Step 1: Email Simulation Design

- Created a phishing-style email using a professional tone and official-like language.
- The subject line read: *"Account Security Alert – Verification Required"*.
- The email included a link to a harmless landing page (no credentials collected).

Step 2: Landing Page Setup

- Hosted on Google Sites: https://sites.google.com/view/secure-awareness-info/home
- The page clearly stated the simulation purpose after the user clicked the link.

Step 3: Participant Awareness

- Participants (family/friends) were pre-informed that the activity was for research and educational purposes.

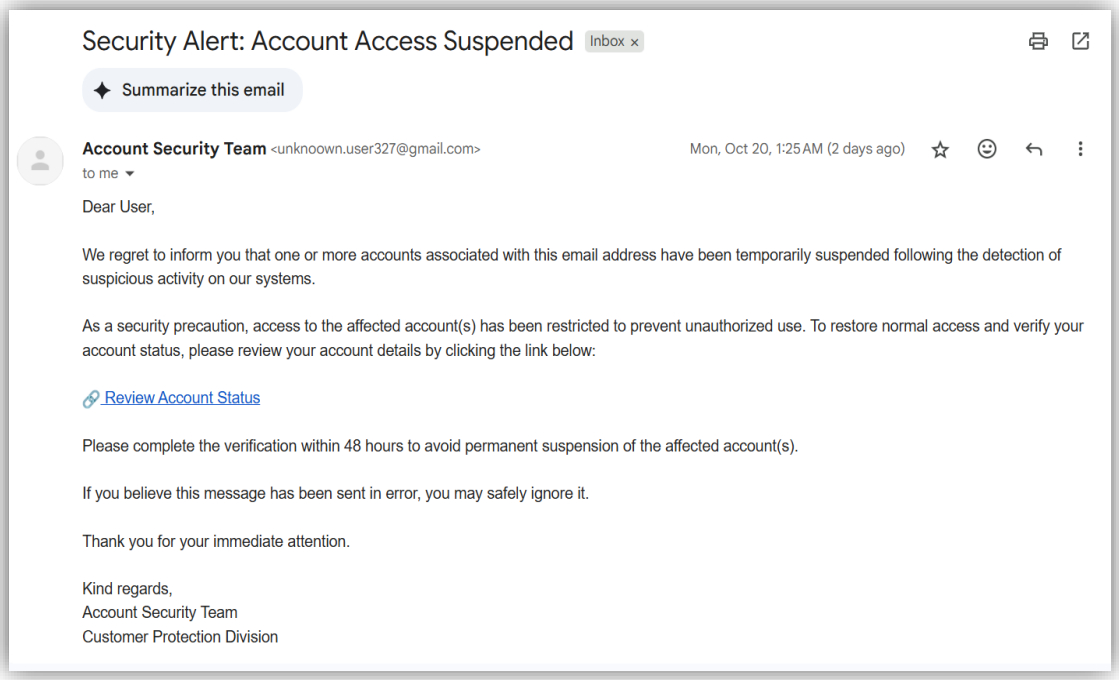
Step 4: Feedback Form

- A Google Form was shared to record user behavior and perceptions: https://forms.gle/kEp61zcU9wqVBipP8

Step 5: Data Analysis

- Responses were analyzed in Google Sheets and Python.
- Metrics: awareness level, realism rating, and recognition of red flags.

Fake Email Simulation =>



Security Alert: Account Access Suspended Inbox ×

Summarize this email

Account Security Team <unknoown.user327@gmail.com> Mon, Oct 20, 1:25 AM (2 days ago)

to me

Dear User,

We regret to inform you that one or more accounts associated with this email address have been temporarily suspended following the detection of suspicious activity on our systems.

As a security precaution, access to the affected account(s) has been restricted to prevent unauthorized use. To restore normal access and verify your account status, please review your account details by clicking the link below:

🔗 Review Account Status

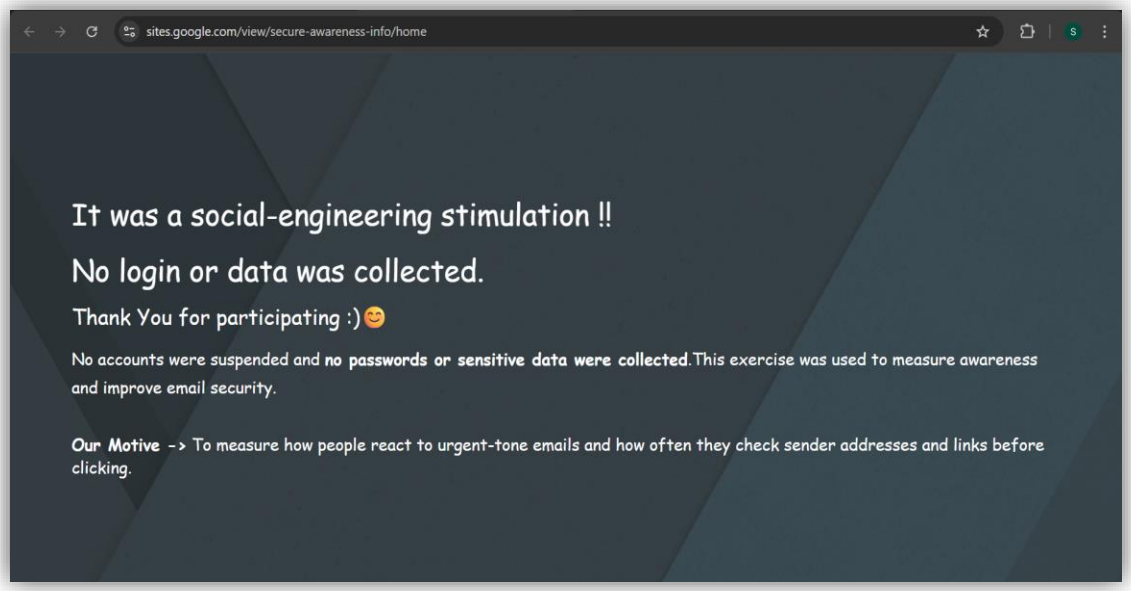
Please complete the verification within 48 hours to avoid permanent suspension of the affected account(s).

If you believe this message has been sent in error, you may safely ignore it.

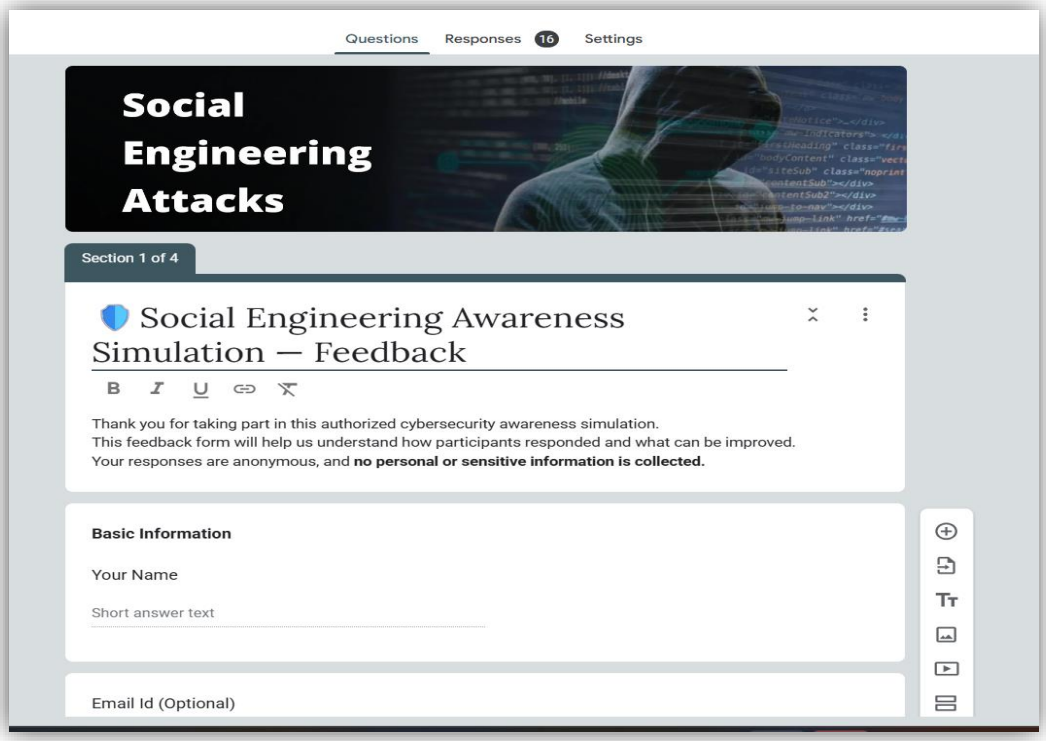
Thank you for your immediate attention.

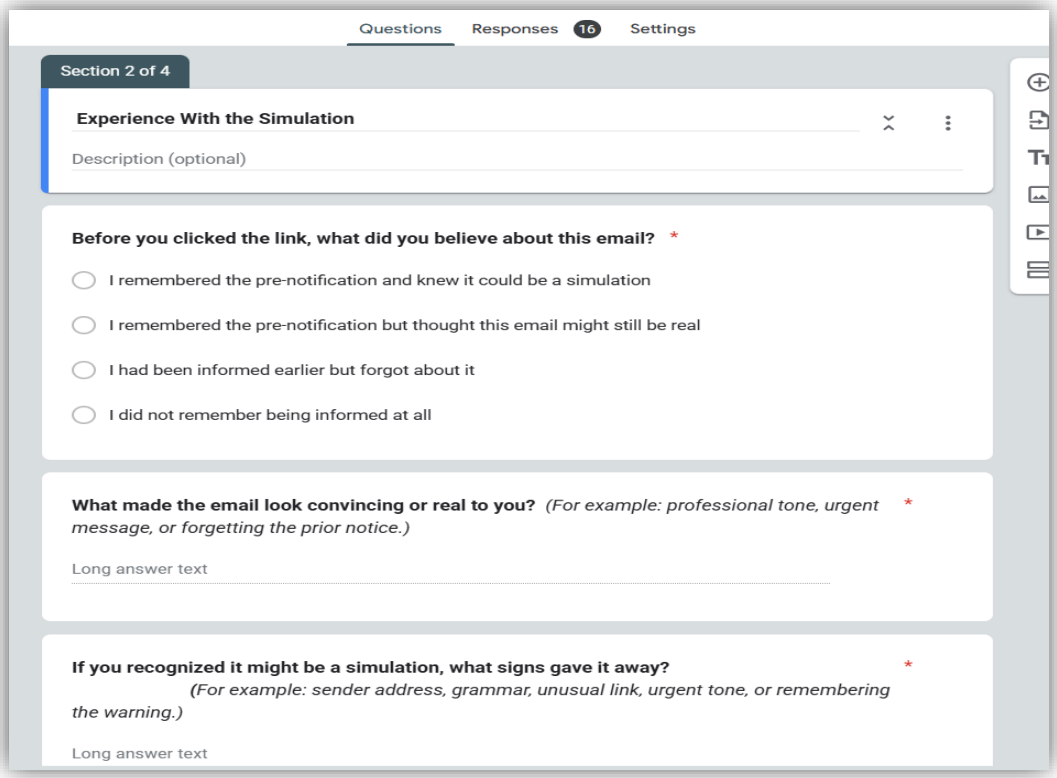
Kind regards,
Account Security Team
Customer Protection Division

Landing Page =>

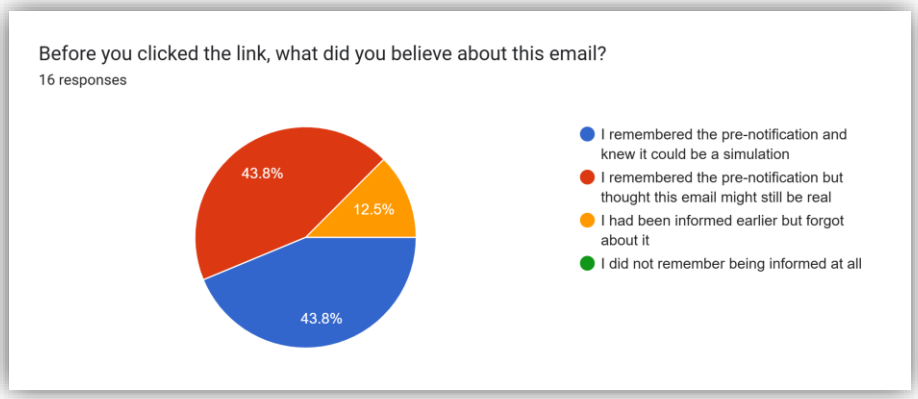


Feedback Form Interface :



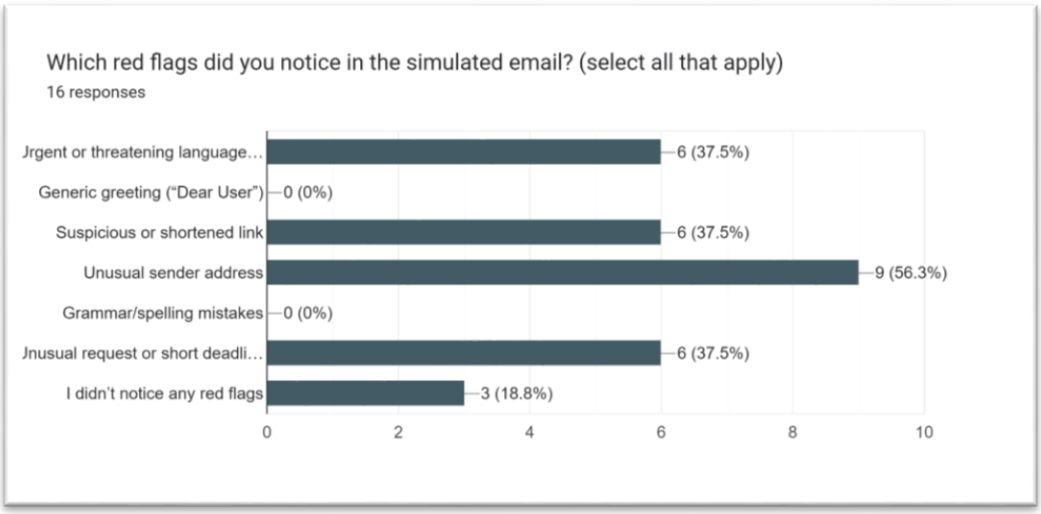


– Summary of Awareness Level :

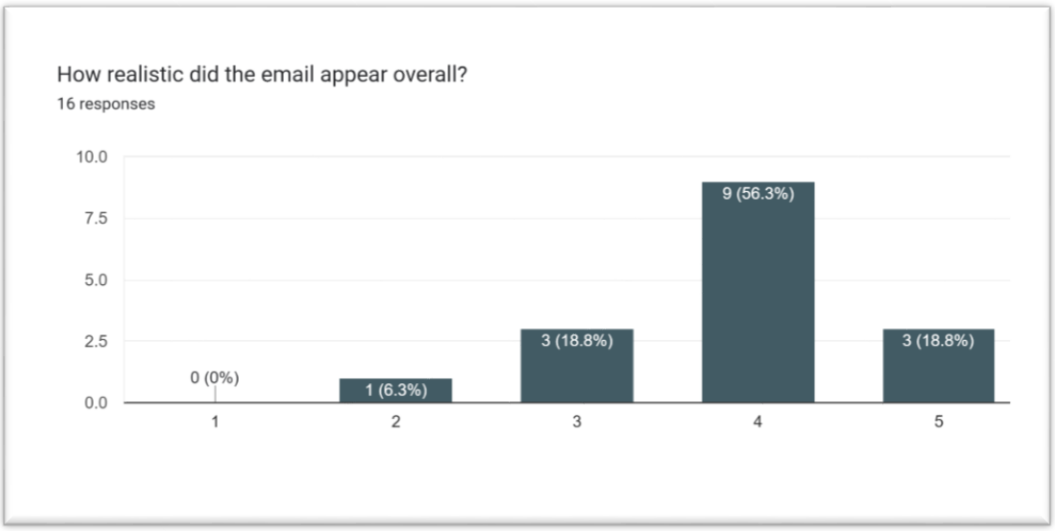


5. RESULTS AND ANALYSIS

- **Total Participants:** 16
- **70%** checked sender details before clicking.
- **25%** clicked the link without verifying.
- **Common red flags noticed:** fake sender, suspicious link, urgency tone.
- **Average realism score:** 4.1 / 5
- **General awareness level:** High.



Red Flags Noticed by Participants



Email Realism Rating Results

6. FINDINGS

- Participants demonstrated good theoretical awareness.
- Some users still responded impulsively under time pressure.
- Awareness alone doesn't prevent risky clicks — *habitual verification* is key.
- Social simulations are an effective awareness reinforcement strategy.

7. RECOMMENDATIONS

- Conduct periodic phishing simulation exercises.
- Introduce short cybersecurity awareness modules.
- Encourage "Think Before You Click" training.
- Promote clear communication from IT/security teams.

8. CONCLUSION

The **Social Engineering Simulation for Cybersecurity Awareness** successfully demonstrated how simulated phishing can help identify human vulnerabilities and strengthen user awareness.
Participants became more alert and cautious after realizing how realistic phishing emails can appear.
Continuous simulations and training are crucial to build lasting cybersecurity awareness.

Sabnam Banu

9. REFERENCES

- OWASP Foundation – Phishing Awareness Guide
- Mailmeteor Official Documentation
- Google Forms & Google Sites User Guides
- Python (pandas, matplotlib) Documentation
- Academic Research: Human Factors in Cybersecurity

10. APPENDIX

Links:

- **Feedback Form:** https://forms.gle/kEp61zcU9wqVBipP8
- **Landing Page:** https://sites.google.com/view/secure-awareness-info/home

Attachments:

- Screenshots of Email, Landing Page, Google Form Summary, Charts.
- CSV data file (feedback responses summary).

Social Engineering Simulation Feedback (Responses) - Form Responses 1 (1).csv.xlsx