

Developer Assessment Task: AI-Generated Phishing Email Templates

Overview

We're assessing your ability to design, build, and deploy a small-scale AI-powered application. Your task is to create an application that generates realistic, HTML-based phishing email templates. These templates will be used in our cybersecurity platform to educate users through safe phishing simulations.

This assessment is meant to showcase your technical skill, creativity, and ability to deliver a complete, user-ready tool using modern AI techniques.

Goals

Business Goals

- Generate realistic phishing emails to test and train users.
- Provide visually authentic templates in HTML format, mimicking real-world tactics.

User Goals

- Simulate phishing threats that look believable and teach users to spot red flags.
 - Enable internal teams to quickly access a library of generated phishing emails.
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Requirements

Core Functionalities

- An interface (web or CLI) where a user can specify:
 - **Scenario Type** (e.g. password reset, invoice, login alert)
 - **Target Industry** (e.g. healthcare, finance, retail)
 - **Urgency Level** (normal, high)
 - **Tone Style** (casual, corporate, urgent)
- The app should use **AI to generate realistic email content** based on these inputs.
- Output should include:
 - **Subject line**
 - **Email body (HTML format)**

- **Fake sender name and email**
- **Call-to-action (button or link with fake URL)**

Output Format

- Must generate **HTML-formatted emails** that render well in email clients (Outlook, Gmail, etc.).
- Include visual styling (e.g. branding colors, headers, logos if applicable).

Customization

- The generator should create **multiple variations per scenario**, with optional ability to “refresh” or regenerate.
- Include a “preview” view showing the email rendered as it would appear in an inbox.

Technology

- Use any AI model you choose (OpenAI API, local models, etc.).
- Agent frameworks like **LangChain**, **LangGraph**, or custom code are welcome.
- Output can be rendered via **Streamlit**, FastAPI, or simple Flask app—your call.

Safety Constraints

- Do not use real brand names or actual phishing URLs.
- All emails must contain a clear **training footer disclaimer** in the HTML (<!-- For training only – not a real phishing email -->).
- No live links; all call-to-action buttons/URLs should be obviously fake or inactive.

Deliverables

1. GitHub Repository

- Full source code with README
- Setup instructions (Python environment, API keys, etc.)

2. Working Demo

- Hosted version (e.g. Streamlit Cloud, GCP, or local video demo)

3. Loom Walkthrough (5–7 mins)

- Explain the architecture
- Show a few generated emails
- Talk through design decisions

4. Examples

- Include at least 6 generated emails (2 per scenario type) in .html format
- Include screenshots of email previews (if not rendering live)

Bonus Points

- Multi-language support (e.g., generate emails in Cantonese/Chinese)
- Add realism by mimicking specific company styles (e.g. logo placement, sender domains)
- Add a library of common phishing tactics with a toggle (e.g., "Credential Harvesting", "Invoice Fraud")
- Export emails as downloadable .eml files


Evaluation Criteria

Area	What We're Looking For
Technical Execution	Clean, well-structured code, proper use of AI models
Prompt Engineering	Clear use of prompting to get realistic, varied outputs
Visual Authenticity	How real do the emails look? Would a user be tricked?
Creativity	Thoughtful, believable phishing scenarios
Presentation	Clear demo, documentation, and explanation
Extensibility	Is it easy to add new tactics or scenario types?

Timeline

You'll have **1 week** from the time you receive this brief to complete and submit your deliverables.

Examples (For reference only, do not directly copy)



Roblox Notification

Hi {{firstName}},

Great news! You've been selected to receive \$50 worth of Roblox currency – that's 4,500 Robux absolutely free!

Whether you want to customize your avatar, unlock exclusive gear, or level up your favorite games, your Robux are ready and waiting.

Click below to redeem your gift card:


[Claim My Robux Now](#)

But hurry – this offer is valid for a limited time!

If you have any questions or need help redeeming your Robux, just reply to this email and we'll be happy to assist.

Happy gaming,
The Roblox Team

This promotion is not affiliated with or endorsed by Roblox Corporation.
Roblox is a registered trademark of Roblox.



This is an automated email. Please do not reply.



Security Alert: Verify Your Account

Hi {{firstName}},

We've noticed some unusual activity on your Instagram account. To help keep your account secure, we need you to verify your account details.

Please click the link below to confirm your identity and update your security settings.

[Verify My Account](#)

If you have any questions or need help, just reply to this email and we'll be happy to assist.

Thanks,
The Instagram Team

This is an automated message, please do not reply directly to this email.
Instagram is a trademark of Instagram LLC.

