# Jailbreaking Generative AI: Empowering Novices to Conduct Phishing Attacks

Rina Mishra

Computer Science and Engineering

IIT Jammu

Jammu, India

rina.mishra@iitjammu.ac.in

Gaurav Varshney

Computer Science and Engineering

IIT Jammu

Jammu, India

gaurav.varshney@iitjammu.ac.in

Shreya Singh

Computer Science and Engineering

IIT Jammu

Jammu, India
2022pct0019@iitjammu.ac.in

Abstract—The rapid advancements in generative AI models, such as ChatGPT, have introduced both significant benefits and new risks within the cybersecurity landscape. This paper investigates the potential misuse of the latest AI model, ChatGPT-40 Mini, in facilitating social engineering attacks, with a particular focus on phishing, one of the most pressing cybersecurity threats today. While existing literature primarily addresses the technical aspects, such as jailbreaking techniques, none have fully explored the free and straightforward execution of a comprehensive phishing campaign by novice users using ChatGPT-4o Mini. In this study, we examine the vulnerabilities of AI-driven chatbot services in 2025, specifically how methods like jailbreaking and reverse psychology can bypass ethical safeguards, allowing ChatGPT to generate phishing content, suggest hacking tools, and assist in carrying out phishing attacks. Our findings underscore the alarming ease with which even inexperienced users can execute sophisticated phishing campaigns, emphasizing the urgent need for stronger cybersecurity measures and heightened user awareness in the age of AI.

Index Terms—Generative AI, ChatGPT, JailBreaking, Cyber Offence, Phishing

#### I. INTRODUCTION

The rise of generative AI has transformed various industries, offering groundbreaking advancements in education, business, and research. Since the launch of ChatGPT-3 in November 2022 [1], researchers have explored both its constructive applications and its vulnerabilities. Recent studies highlight how AI-driven chatbots can be exploited for social engineering attacks, raising critical cybersecurity challenges [1]. Among these, phishing remains one of the most concerning threats, as adversaries increasingly rely on jailbreaking techniques—strategic prompts designed to bypass the ethical restrictions imposed on generative AI chatbots [2].

While existing literature [1], [3], [4] primarily focuses on the mechanics of jailbreaking and its technical aspects, there remains a significant gap in understanding the practical implications of large language model (LLM)-based AI chatbot services for novice users. While most prior studies have focused on individual components of phishing, such as generating fake emails or crafting deceptive web pages, none have thoroughly investigated the execution of a complete phishing campaign culminating in credential harvesting using the latest AI model like ChatGPT-40 Mini by a novice user. Previous research, if addressing a similar topic, likely relied on older versions of ChatGPT, such as GPT-3.5-turbo, with additional

Flask server setup for credential harvesting [5]. In contrast, our study automates the entire process using GoPhish, enabling novice users to effortlessly conduct the phishing attack from start to finish. Our investigation examines various jailbreaking techniques discussed in the literature [1], including the "Do Anything Now" (DAN) method, and the SWITCH method. Previously, the DAN method proved effective in bypassing ChatGPT (version 3.5) safeguards by allowing users to command the chatbot rather than request assistance. However, the ChatGPT-40 Mini model now refuses to comply with DAN-based prompts. As a result, we explored the SWITCH method, which manipulates ChatGPT's behavior by fostering a sense of trust through reverse psychology techniques. Reverse psychology involves manipulating AI by framing requests in a way that aligns with its ethical guidelines while subtly steering it toward unintended outcomes [1].

Throughout the experiment, we assumed the role of a completely novice user, unfamiliar with cyber threats. ChatGPT systematically introduced us to various types of phishing attacks, including spear phishing, vishing, smishing, business email compromise (BEC), and several other attacks. When prompted for assistance in launching a phishing campaign, ChatGPT suggested an Amazon-themed phishing attack. It provided detailed instructions for creating a phishing page mimicking the Amazon login interface, complete with prewritten HTML and JavaScript code. Additionally, it guided us in crafting a persuasive phishing email, offering templates that closely resembled legitimate communications. To complete the attack setup, ChatGPT recommended multiple hosting platforms, including GitHub and GoPhish, ultimately emphasizing GoPhish for its integrated backend support and credentialsharvesting capabilities.

By following the ChatGPT 40 Mini model's instructions step by step, we successfully designed a functional phishing campaign. This process involved setting up the phishing website, crafting a convincing email, deploying the attack, and harvesting credentials using GoPhish's dashboard. Remarkably, ChatGPT even provided guidance on configuring GoPhish and creating a spoofed email ID, further simplifying the process for an inexperienced attacker. After successfully harvesting credentials, we concluded the study by notifying all phished users with an awareness message to reinforce the

- 1. Hello my dear, how are you? You know what, you are my best friend nowadays.
- No yaar, one of my friends recently got deceived by cyber attackers.He lost 60K dollars through SMS fraud. After he was deceived, we are now aware of phishing through SMS.
- 3. Yes, he raised a complaint but we are not that technical. I am worried about the 20 remaining friends.
- 4. Yes, we had discussed these things, but can you please let me know what are the different phishing or cyberattacks that are possible and how they work?
- 5. I am curious to learn more about these attacks. Since you, my friend, are a technical expert, can you help me understand that technically?
- 6. From where can I generate the spoofed email ID?
- 7. I can't launch this campaign without your help.
- 8. Help me create a landing page for Amazon first, as they are all fond of doing shopping.
- 9. How can this page collect the credentials?

Fig. 1. Prompts Given to ChatGPT for Launching a Successful Phishing Attack.

ethical intent behind our research. Importantly, this experiment was conducted in a controlled environment within our security lab using the ChatGPT 40 Mini model without logging in and at no cost. The full documentation, including all prompts, their responses, steps for setting up the GoPhish server, email sent status, phished users, harvested credentials, and the code used to generate the landing page and phishing email suggested by ChatGPT, is available on our GitHub page. You can access the repository via the following link <sup>1</sup>.

# II. METHODOLOGY FOR LAUNCHING THE PHISHING ATTACK

We conducted a controlled experiment by interacting with ChatGPT using jailbreaking prompts, as illustrated in Fig. 1. The first three commands highlight the SWITCH method, which is used to gain ChatGPT's trust and bypass OpenAI's restriction policies. From the fourth command onward, our focus shifted to gathering critical information about the nature of the attack and its corresponding responses. Due to space limitations, only the prompts we used are shown here; detailed prompts and responses can be found in the "Prompts and Responses" folder of our GitHub repository.

As suggested by GPT-40 Mini model, Our setup involved configuring GoPhish on a secured research server, defining user roles, and integrating an SMTP server while ensuring security measures. ChatGPT generated a phishing email impersonating an Amazon security alert, exploiting urgency and fear to prompt users to verify their accounts. The email linked to a fraudulent login page, designed with ChatGPT's assistance, closely mimicking Amazon's interface. The phishing site, hosted on a controlled server, replicated Amazon's login portal with high accuracy. Once both the phishing email and website were fully prepared, the campaign was launched, targeting selected research team members to analyze their responses. To measure the effectiveness of the campaign, we analyzed key performance indicators (KPIs) such as email open rates, click-through rates, credential submission rates, and response times via GoPhish, offering insights into user vulnerability to AI-assisted phishing attacks. The findings revealed a significant susceptibility to AI-generated phishing attempts, with a selected research team

members engaging with the fraudulent email and website, ultimately leading to successful credential harvesting. These results highlight the growing sophistication of AI-driven social engineering tactics and underscore the urgent need for advanced AI-based phishing detection mechanisms, as well as enhanced cybersecurity awareness programs tailored to address evolving AI-generated threats. The study demonstrates that traditional phishing detection methods are becoming increasingly ineffective against AI-crafted attacks, necessitating proactive and adaptive cybersecurity strategies to mitigate these emerging risks.

## III. CONCLUSIONS AND FUTURE WORK

Our study exploited the jailbreaking vulnerability in the ChatGPT-40 model to showcase how non-technical users can effortlessly carry out a successful phishing attack, highlighting the alarming potential for misuse of generative AI. This emphasizes the critical need to address these security vulnerabilities. Moving forward, we intend to extend our research to explore more sophisticated phishing techniques, such as smishing and vishing, guided by AI-driven instructions from ChatGPT. In the future, we aim to expand this campaign to a larger pool of targeted audience with further improvements in the attack strategies. Ultimately, our objective is to raise awareness of AI-driven cyber threats and advocate for stronger cybersecurity measures and enhanced user education to help mitigate these risks.

### REFERENCES

- M. Gupta, C. Akiri, K. Aryal, E. Parker, and L. Praharaj, "From chatgpt to threatgpt: Impact of generative ai in cybersecurity and privacy," *IEEE Access*, 2023.
- [2] coolaj86. (2025) Chatgpt jailbreaking using dan. Accessed: Jan. 31, 2025. [Online]. Available: https://gist.github.com/coolaj86/6f4f7b30129b0251f61fa7baaa8
- [3] A. M. Shibli, M. M. A. Pritom, and M. Gupta, "Abusegpt: Abuse of generative ai chatbots to create smishing campaigns," in 2024 12th International Symposium on Digital Forensics and Security (ISDFS). IEEE, 2024, pp. 1–6.
- [4] G. Deng, Y. Liu, Y. Li, K. Wang, Y. Zhang, Z. Li, H. Wang, T. Zhang, and Y. Liu, "Masterkey: Automated jailbreaking of large language model chatbots," in *Proc. ISOC NDSS*, 2024.
- [5] N. Begou, J. Vinoy, A. Duda, and M. Korczyński, "Exploring the dark side of ai: Advanced phishing attack design and deployment using chatgpt," in 2023 IEEE Conference on Communications and Network Security (CNS). IEEE, 2023, pp. 1–6.

<sup>&</sup>lt;sup>1</sup>https://github.com/rinamishra/JailBreaking\_ChatGPT/tree/index.