



CONSTRUCTING TRUST IN PHISHING EMAILS: A CORPUS-ASSISTED DISCOURSE ANALYSIS
OF LEXICAL AND PERSUASIVE STRATEGIES

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Abstract

Using Sketch Engine's *Word Sketch*, *Word Sketch Difference*, *Concordance*, and *Wordlist* features, this study aims to identify how trust is linguistically constructed in phishing emails. Guided by Mayer, Davis, and Schoorman's (1995) Integrative Model of Organizational Trust, Halliday's Systemic Functional Linguistics, and Cialdini's Principles of Persuasion, the analysis identifies how a small set of recurring lexical and grammatical choices work together to project competence (Ability), care for the recipient (Benevolence), and legitimacy (Integrity). For example, the noun *authority* collocates most strongly with *reassurance* and *urgency*; the lemma *urgency* consistently co-occurs with *authority* and *reassurance* across the dataset. The analysis also shows how urgency-marked directives, hedged modality, and service-oriented reassurance combine to produce a compact yet internally coherent trust-building schema, consistent with patterns reported in prior research on phishing linguistics and persuasion.

Keywords: Emails, Trust, Corpus, Sketch Engine, Ability, Integrity, Benevolence.

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Introduction

Phishing emails are fraudulent emails that rely on persuasion rather than technology. During the recipient's click on a link, share credentials, or transfer funds without an actual security incident is possible through a convincing message that appears to be from an official institution (Alkhalil et al., 2021). How these messages affect trust is thus a challenge for both cybersecurity research and corpus linguistics and discourse analysis. Ferreira and Teles (2019) showed that phishing emails exploit specific and distinguishable persuasive principles to make recipients victims of the attack and to overcome critical evaluation of the email. In addition, different research studies have been conducted to analyse phishing emails, for example, Alexandratou et al. (2019) conducted a corpus-based analysis of phishing subject lines, and Ferreira et al. (2020) conducted a network analysis of these subject lines to determine the lexical and relational cues used by phishers and their centrality to the phishing process and to the creation of the impression of proximity and institutional legitimacy. Rosyidah (2025) found that phishing emails used time-sensitive messages or references to institutions to pressure victims into taking action, a form of semantic framing. Several large-scale computational experiments have also shown that, on a corpus scale, certain persuasion principles, such as *authority*, *scarcity*, and *urgency*, are among the best predictors distinguishing phishing from legitimate email (Bustio-Martínez et al., 2024). These results align with previous studies on linguistically deceptive cues in computer-mediated communication, which reveal systematic differences between deceptive and truthful messages in measurable linguistic features (Zhou et al., 2004).

The current research study aims to explore how trust can be built in phishing emails. The analysis in this study is deliberately limited because it concerns a corpus of texts that employ fraudulent persuasive strategies to build trust. According to Baker et al. (2008), corpus-based analysis is not used to make claims about naturally occurring variation in discourse that the data cannot support, but rather to make recurring, systematically patterned choices explicit. Moreover, three theoretical resources also guide the analysis. This paper draws analytic categories from Mayer, Davis, and Schoorman's (1995) Integrative Model of Organizational Trust, a model which is complemented by research on how trust can be established rapidly in new, unfamiliar relationships based on institutional and categorical cues, rather than direct experience, a research area relevant directly to a one-off, unsolicited email from an unfamiliar sender (McKnight et al., 1998; McKnight et al., 2002). Halliday's Systemic Functional Linguistics offers methods for analysing interpersonal meaning, mood and modality, which refers to the way in which the text situates the reader, and affects obligation and certainty (Halliday & Matthiessen, 2014). The principles of persuasion can provide a complementary explanation for why these language choices are likely to be persuasive, specifically: the principle of authority, scarcity of time (urgency), and reciprocity (Cialdini, 2009).

The evidentiary base of this research is restricted to the corpus outputs provided for analysis, so the discussion is limited to what can be shown in those outputs, with the verified literature cited above as supporting evidence where appropriate. The paper's contribution is thus modest but concrete: a close, theoretically informed analysis of the interplay of a small number of repeated choices in the construction and development of a compact trust-construction schema, supported by corpus evidence and interpreted by a well-established trust model.

Research Methodology

Research Design

This study adopts a mixed-methods corpus-assisted discourse analysis (CADS) design (Baker et al., 2008; Partington et al., 201; Khan & Hassan, 2025; Arbab et al., 2025; Nawaz et al., 2025; Hassan et al., 2023; Hassan et al., 2024), in which corpus-linguistic tools such as the Sketch Engine (Kilgariff et al., 2014) was used not only to generate large-scale statistical generalizations but also to make visible the recurring lexical, collocational, and phraseological choices of a bounded text collection, which are then interpreted through an explicit theoretical framework. This choice follows directly from the nature of the dataset (described below) and from the study's aim, which is to demonstrate how a specific set of trust-relevant linguistic features is organized within a single phishing email schema, rather than to test a hypothesis about phishing corpora in general.

Corpus Design

The dataset consisted of 50 short emails, each about 150-250 words, covering topics such as bank verification, package delivery, lottery, tech support, tax refund, job offer, charity, account suspension, crypto investment, and invoices. The overall corpus comprised 11320 tokens. The corpus was loaded to Sketch Engine as a custom user corpus (called "Emails" in Sketch Engine's interface) and run through the default English tagging and lemmatisation features of Sketch Engine (Mukhtyar et al., 2026; Hassan et al., 2026; Bibi et al., 2025).

Ethical Consideration

The researcher has collected a set of 50 articles from different online websites. All these emails are publicly available and may be used for research purposes; however, the researcher of the current study did not reveal any information about the sender or receiver of these emails. All information about the authors of these emails is kept confidential and has not been shared with any third party.

Corpus Analysis

Four Sketch Engine functions were used to analyze the corpus. First, the Word Sketch function was applied to the noun authority to generate a proportional collocational summary of its grammatical relations within the corpus. Second, the Concordance function was applied to the node word 'urgency' in Keyword-in-Context (KWIC) format, displaying every instance of the node along with its left and right context. Third, the Word Sketch Difference function was applied to the pair authority and urgency, producing a gradient visualization of shared and distinctive collocates. Fourth, the Word List function was applied to the adjective part-of-speech tag across the whole corpus, ranking all adjective lemmas by frequency and frequency-per-million.

Analytically, each output was first described in its own terms (what the tool returns and what it shows about the corpus), and then interpreted in two further steps: first through Systemic Functional Linguistics, to characterize the interpersonal work being done by the relevant lexical and grammatical choices (mood, modality, directive structure); and second through Mayer, Davis, and Schoorman's (1995) three trust dimensions, supplemented by Cialdini's (2009) principles of persuasion, to explain why the identified pattern is plausibly effective as a trust-building or compliance-inducing device. Given the corpus's template-based construction, this study treats frequency counts as evidence of the template's internal organization rather than as evidence of variable authorial choice across independent writers; this interpretive stance is explicitly stated whenever a finding could otherwise be misread as a claim about naturally occurring variation.

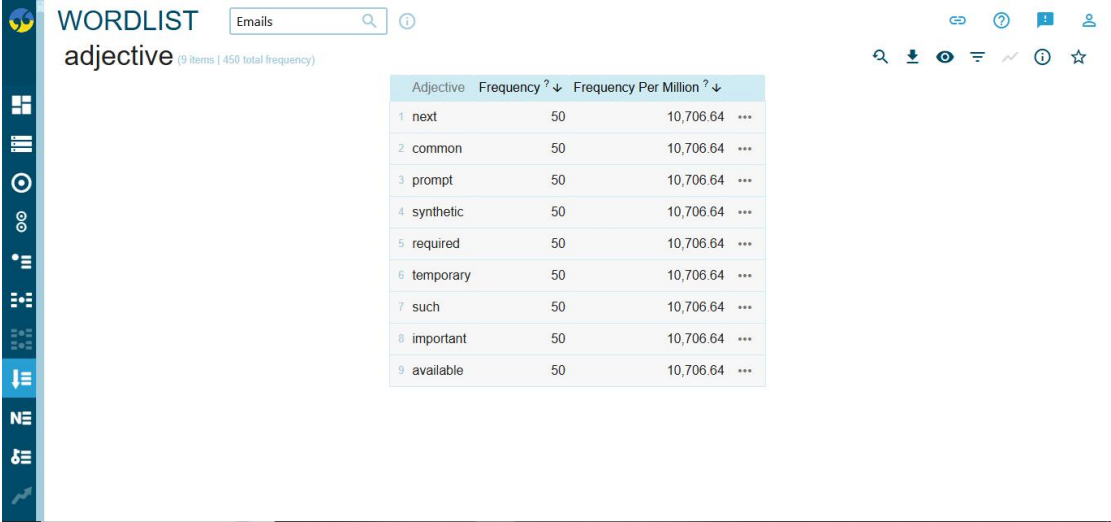


Theoretical Frameworks

This study is primarily based on the Integrative Model of Organizational Trust (Mayer et al., 1995), which explains trust through the dimensions of ability, benevolence, and integrity. The dimensions serve as a framework for studying how linguistic features of phishing emails convey perceptions of competence, concern, and legitimacy. In addition, the study draws on analyses of interpersonal meanings expressed through mood, modality, and directives in Systemic Functional Linguistics (Halliday & Matthiessen, 2014), as well as on analyses of persuasive techniques based on the Principles of Persuasion (Cialdini, 2021). When combined, these frameworks help analyze the linguistic construction of trust in phishing emails.

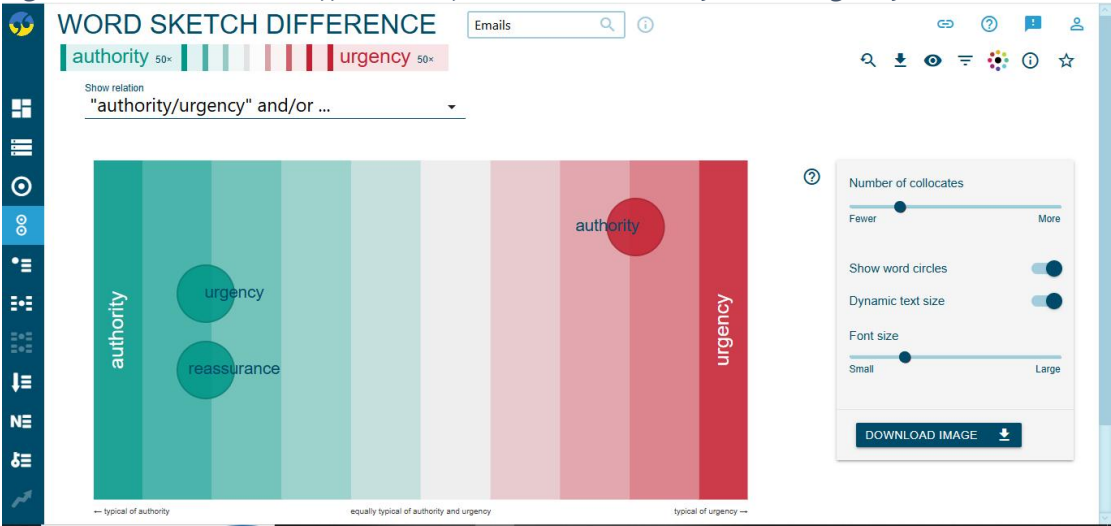
Results and Discussion

Figure 1: Adjectives appeared in the Dataset



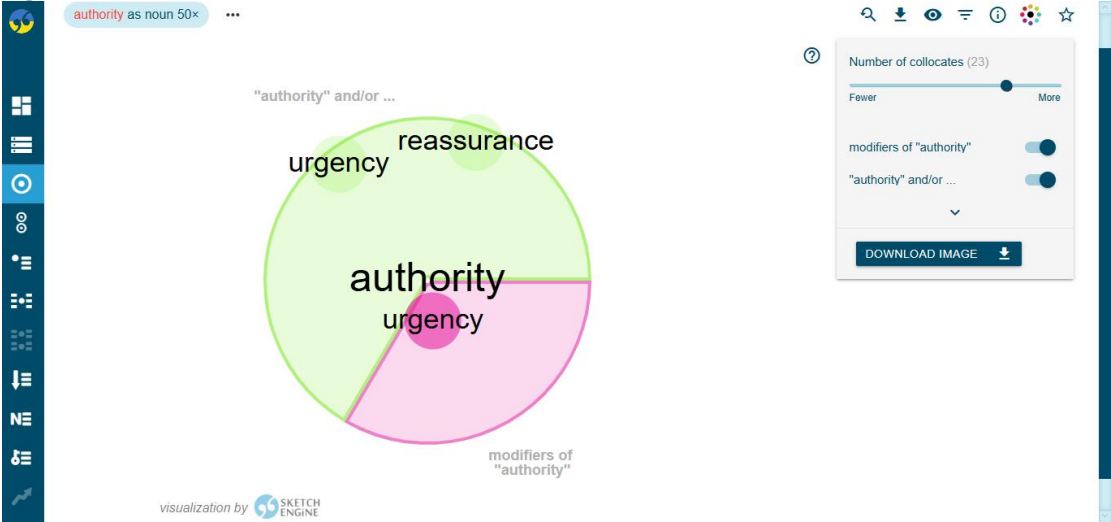
The word list of adjectives (next, common, prompt, synthetic, required, temporary, such, important, available) can also be read collocationally, i.e., each of these adjectives is used in combination with a noun in a short template and thus is a fixed phraseological unit with it (e.g., prompt attention, required information, temporary service interruption, available support, etc.). Combined, these adjective-noun combinations provide semantic scaffolding for the authority/urgency/reassurance triad listed above: required and important create a sense of the directive force of the message; prompt and next create urgency without being threat-making categorical; and temporary and available soften the perceived threat of the situation and foreground accessible institutional support. This is in line with the previous study based on the corpus, which found that phishing registration websites use a limited, repetitive, and common set of words mostly related to the concepts of account, verification, and urgency, but do not contain much lexical variation or improvisation (Ferreira et al., 2020; Rosyidah, 2025).

Figure 2: Word Sketch Difference of Lemmas 'authority', and 'urgency'



Before discussing each of the four Sketch Engine outputs used in this study in turn, it is helpful to outline the general collocational profile briefly. Collocation refers to the tendency of words to co-occur with other words more often than chance would predict. The three items that recur as a bound set across the word sketch, concordance, word sketch difference, and word list outputs are: authority, urgency, and reassurance. The three terms are not high-frequency words on their own, but are always part of a small text space, either the same bracketed annotation (the concordance evidence, as discussed below) or the same neighbouring text segments in the same proportional visualization (the word sketch and the word sketch difference outputs). This pattern shows that, in the corpus, none of the trust-relevant concepts is linguistically isolated from the others: institutional/expert framing (authority), affective reassurance (reassurance), and temporal pressure (urgency) are colloquially linked and not separated into unconnected sections of text.

Figure 3: Word Sketch of the Lemma 'authority'



The sketch difference view in Figure 3 shows collocates of authority and urgency on a single continuum, ranging from features typical of authority to a common middle ground to features typical of urgency. In this visualization, reassurance is close to the authority pole, within what the tool considers to be more like the authority space, and urgency's “best” collocates bunch around the other end of the same diagram, where authority is supposedly



more like urgency, and the two node words, in fact, appear together in the corpus rather than in separate contexts. This asymmetry is analytically informative because it implies that the template's framing of reassurance primarily complements institutional and expert framing (Ability). In contrast, the framing of urgency is a relatively autonomous rhetorical lever. However, it is not totally divorced from the authority framing either, as the two frames co-occur in the same fixed annotation as well as in the adjacent sentences of the body text (the deadline sentence is always located ahead of the support-and-thanks sentence in every document). This pattern is consistent with a persuasion strategy in which time pressure (urgency) is immediately followed by institutional reassurance (authority/Benevolence). This sequencing may reduce the recipient's inclination to pause and scrutinize the request, an interaction effect between Cialdini's (2009) urgency and authority principles that the trust model alone does not capture, but which attention to clause sequencing in Systemic Functional Linguistics helps to make visible (Halliday & Matthiessen, 2014). Large-scale computational studies of authentic phishing corpora have likewise found that authority and urgency frequently co-occur as jointly, rather than independently, predictive persuasion cues (Bustio-Martínez et al., 2024), lending external plausibility to the pattern observed here.

Figure 4: Concordance Lines of the Lemma 'urgency'

There's a sense of the process. We want to highlight the	urgency	around today's project deadline. Your manager has
Today Hi Alex, There's a sense of	urgency	of confirming your attendance for tomorrow's meeting.
Hi Maria, We'd like to highlight the	urgency	around today's project update. Your team lead
appointment is tomorrow morning, and there's some	urgency	of completing your training today. HR has
4 Subject: Meeting Confirmation Hi Olivia, There's	urgency	in confirming your attendance today. Our scheduling
Closing Soon Hello Daniel, Please note the	urgency	in confirming tomorrow's meeting so we can
6 Subject: Survey Reminder Hi Emma, There's	urgency	of completing your registration before 5 PM.
Hello Team, We'd like to emphasize the	urgency	in completing our employee survey today. The
8 Subject: Document Review Hi Chris, There's	urgency	of reviewing the updated safety procedures. The
Sophie, Please confirm your attendance today. There's	urgency	in reviewing the attached document before tomorrow.
10 Subject: Payroll Verification Hi Michael, There's	urgency	because seating arrangements are being finalized. The
11 Subject: Maintenance Reminder Hello Residents, There's	urgency	in verifying your payroll information before processing
12 Subject: Software Update Hi Team, There's	urgency	in preparing for tomorrow's maintenance work. Building
Liam, Please confirm your availability today. There's	urgency	in installing the latest software update today.
14 Subject: Course Enrollment Hi Student, There's	urgency	because volunteer assignments are being completed. The
15 Subject: Budget Submission Hello Team, There's	urgency	in completing your enrollment before the deadline.
Hi Everyone, We'd like to stress the	urgency	in submitting your department budget today. The
17 Subject: Parking Update Hello Staff, There's	urgency	of completing this week's compliance task. Company
Subject: Health Check Reminder Hi Taylor, There's	urgency	in reviewing the new parking arrangements before
19 Subject: Performance Review Hello Jordan, There's	urgency	in scheduling your annual health check this
20 Subject: Community Meeting Hi Neighbor, There's	urgency	in selecting your preferred review time today.
	urgency	in confirming your attendance for this weekend's

The concordance for urgency in Keyword-in-Context (KWIC) format shows a striking regularity: in all fifty lines, the node word is immediately preceded by "such as" and immediately followed by "authority, and reassurance," as part of the corpus's bracketed research annotation. Because this string is part of the corpus's fixed metatextual label rather than freely composed text, it cannot be read as fifty independent authorial decisions to co-locate these three terms; it is one decision, replicated fifty times by the corpus's construction. This is an important methodological observation, and one that this paper makes explicit rather than treating the fifty identical concordance lines as fifty separate pieces of evidence. What the concordance does confirm, however, is that the corpus's own design treats urgency, authority, and reassurance as the three defining ingredients of the phishing register it is meant to illustrate a claim that is corroborated, at the level of the email body text itself, by the co-occurrence of a hard deadline ("within the next 24 hours"), an institutional signature ("Customer Support Team"), and a closing reassurance-and-thanks move in every document. In Hallidayan terms (Halliday & Matthiessen, 2014), the urgency in the body text is carried primarily by temporal circumstantial elements ("within the next 24 hours") and by a conditional-consequence clause ("Failure to respond may result in temporary service

interruption"), which uses modalized possibility (may) rather than categorical certainty (will). This modal hedging has analytical interest, since a categorical threat would be easier to falsify and more likely to raise suspicions. At the same time, a hedged possibility would maintain plausibility but still put pressure on the reader to act, as Cialdini (2009) explains in his urgency/scarcity principle, and as Ferreira and Teles (2019) have noted in their study of the corpus evidence that this is a recurring quality of persuasive phishing language.

Theoretical Interpretation

Ability

The word list in Figure 1 and the word sketch in Figure 3 are the most direct support for the dimension of Ability. An institutional signature, the "Customer Support Team," as well as the assertive claim to have "detected an issue," suggest that the sender has privileged, specialist access to the recipient's account and is thus an Ability cue in the terminology of Mayer et al. (1995). The detection claim is never hedged—unlike the conditional-consequence clause discussed below under Integrity, it is a simple, unmodalized statement. As such, in Hallidayan terms, it has the interpersonal force of a categorical statement (Halliday & Matthiessen, 2014). This is reinforced by the word list: required and important (Figure 4) are directive-adjacent adjectives which suggest a known, specific standard the recipient must adhere to. Only a competent authority would have the power to specify such a standard. Run through Cialdini's (2009) authority principle; this is what does much of the persuasive work in the template, it gives it the appearance of legitimate expertise, and the sender does not have to provide any evidence for this.

Benevolence

The word sketch in Figure 3 and the word sketch difference in Figure 2 indicate that the reassurance collocates that accompany the words of authority are also signs of benevolence, as well as the closing moves of the email itself: the offer of help ("Our support team is available to assist you") and the advance thanks ("Thank you for your prompt attention"). Available (Figure 1) is a lexical marker of this dimension, the most transparent single adjective, as it characterizes support as already available to the recipient rather than something he or she must actively seek. This is in line with McKnight et al. (1998, 2002), who explained how an impression of goodwill can be formed by a largely unknown institutional sender in the very first, unsolicited contact, well before any history between sender and receiver is established. Interpersonally, the mitigated imperative, please review (as opposed to a bare imperative), serves a similar Benevolence-supporting purpose in softening the face-threateningness of instructing the recipient (Halliday & Matthiessen, 2014). However, from Cialdini's (2009) perspective, the offer of support and the expression of gratitude in advance also invoke the reciprocity principle: the compliance required might be interpreted as owed, to some degree, in return for the support offered.

Integrity

Integrity is the least well-evidenced of the four outputs. This template does not include any elements typically found in legal disclaimers, privacy policies, verifiable sender details, or other elements common to authentic phishing corpora, as documented in analyses of such corpora (Alkhalil et al., 2021). That is the extent to which the template manages to – it is comparatively indirect, opting for the hedged conditional clause 'may result in' rather than the categorical one that would otherwise be easily falsifiable (will result in), in order to maintain the surface plausibility of the message (Halliday & Matthiessen, 2014). Whether such a softening of the verifiable phrasing, and such a lack of rigour, actually qualifies as honesty or just as more vagueness is a matter for debate; it is not something this paper

claims to have decided, or to be able to tell from the present outputs. Cialdini's (2009) scarcity/urgency principle, however, may explain the fact that the gap may not be as important to a time-pressured reader versus a leisurely evaluation: the temporal adjectives prompt and next (Figure 1) and the 24-hour time constraint both serve to shorten the decision window where such verification might otherwise occur.

Limitations and suggestions for future researchers

The major limitation of the study concerns Integrity: Mayer, Davis, and Schoorman's (1995) third trust dimension is only weakly evidenced in the present dataset because the corpus contains no legal disclaimers, privacy notices, or verifiable sender credentials, features that are well documented in authentic phishing corpora (Alkhalil et al., 2021). A second limitation concerns generalizability (Bustio-Martínez et al., 2024; Ferreira et al., 2020; Rosyidah, 2025). Future research could address these gaps directly by compiling a corpus of more and varied phishing emails, subject to appropriate ethical safeguards for handling such material, applying the same word sketch, concordance, and word list procedures used here, and testing whether the co-occurrence pattern identified between authority, urgency, and reassurance emails sent to concerning other subject matters.

Conclusion

This study has illustrated how trust is constructed in phishing emails through specific lexical and grammatical choices. By employing a corpus-assisted discourse analysis guided by established theories of trust and persuasion (Mayer, Davis, and Schoorman, 1995; Halliday, 2014; Cialdini, 2009), this study has identified key elements that contribute to the burgeoning sense of legitimacy and reliability within these fraudulent communications. The findings reveal that recurring strategies, such as the strategic use of authority, urgency, and service-oriented reassurance, create a compelling narrative that can mislead recipients and prompt them to respond without critical evaluation. The analysis highlighted how urgency-marked directives and hedged modalities work together to navigate the recipient's cognitive biases, fostering a fragile sense of trust (Bustio-Martínez et al., 2024; Ferreira & Teles, 2019; Rosyidah, 2025). These insights underscore the importance of understanding the persuasive mechanisms inherent in phishing emails, which can augment cybersecurity measures by informing users about the specific linguistic cues to recognize and avoid. Moving forward, this research advocates further exploration of phishers' evolving strategies and calls for integrating linguistic analysis into cybersecurity training and awareness programs. By shedding light on how trust can be linguistically manipulated, this study paves the way for enhanced protective measures against these increasingly sophisticated threats. Ultimately, raising public awareness of these deceptive tactics is crucial for maintaining trust in digital communications and enhancing overall cybersecurity resilience.

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