

TECM 5190 | STYLE AND TECHNICAL WRITING

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ANALYSIS OF 2 TONES OF VOICE GENERATIVE AI CONTENT OUTPUT

PREPARED FOR DR. KIM SYDOW CAMPBELL
THE UNIVERSITY OF NORTH TEXAS

PREPARED BY CYNTHIA EVERITT
CYNTHIAEVERITT@MY.UNT.EDU

EXECUTIVE SUMMARY

ChatGPT-4 is a powerful chatbot developed by OpenAI that technical writers can use in all work processes: pre-writing, drafting, and revising. It mimics human conversation by answering questions and following instructions. For this report, I used ChatGPT-4 to create two different tone-of-voice versions of the same original text to analyze the linguistic variations implemented in each one.

You provided the original version, and I produced the two new versions using a series of prompts. After several refinements, I chose the final versions of each tone of voice and studied them for linguistic variations, comparing them to the original version. This report describes the methods, analysis, and conclusions. I also included the prompts that I used and the full text of the original and final versions in the Appendices.

ChatGPT-4 successfully created acceptable output for both versions. The formal version was the better of the two.

INTRODUCTION

Natural language processing (NLP) is a type of artificial intelligence that combines language and machine modeling to parse, understand, and generate text speech. Computers are trained using unstructured text from internet sources and use this network of information to respond to prompts and generate predicted output.

Naturally, technical writers can use ChatGPT-4 for many of their tasks. However, it has limitations that users must work with. The more that we use ChatGPT-4, the more intelligent it will become, and it will enhance technical writing even more. It is currently adequate for mundane writing tasks, which frees up technical writers to use their skills in more productive ways.

Understanding the choices ChatGPT-4 makes to generate its output is essential for technical writers so we can utilize it appropriately.

METHODS

You provided the original version of the content for this analysis, which is a text selection from a job posting. I used ChatGPT-4 to generate content in different tones of voice for this analysis.

All ChatGPT-4 prompts used in this analysis are recorded in Appendix I: GenAI Prompts at the end of this document.

To create the **formal version** of the content, I followed these steps:

1. I began by prompting ChatGPT-4 (Prompt 1) to analyze the original content to determine its tone of voice.
 2. Then, I used Prompt 2 to request that ChatGPT-4 produce two different formal versions of the content, Version 1 and Version 2. I preferred Version 1.
 3. Next, I prompted ChatGPT-4 (Prompt 3) to create a reduced Version 1 with an enhanced formal tone.
 4. I was unsatisfied with this version, so I asked ChatGPT-4 to take Version 2 and make a reduced version (Prompt 4).
 5. I liked the reduced version of Version 2, so I asked ChatGPT-4 to make Version 2 more formal (Prompt 5).
 6. I was satisfied with this enhanced Version 2, so I ended my ChatGPT-4 session.
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To create the **casual version** of the content, I followed these steps:

1. First, I prompted ChatGPT-4 (Prompt 1) to analyze the content to determine its tone of voice.
 2. Then, I requested that ChatGPT-4 create 2 versions of the content in a casual tone of voice (Prompt 2). I preferred Version 2.
 3. Next, I asked ChatGPT-4 to use Version 1 and make it more casual (Prompt 3). I wasn't pleased with this output.
 4. I asked ChatGPT-4 to use Version 2 and make it more casual (Prompt 4). This is the version that I liked the best, so I ended my ChatGPT-4 session.
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I observed that ChatGPT-4 gives better output when it is given a scenario to follow, rather than just a request. Instead of writing, "rewrite this in formal tone," it works better to use a prompt like "You are a technical writer creating a job posting for your company. How would you describe the tone of the following job posting?" It gives more context for ChatGPT-4 to use in creating its answers.

Also, ChatGPT-4 gives better content output for tone of voice if you give it more than one descriptor to work with. Instead of asking for "formal tone," I used descriptors like:

Formal tone

- professional
- descriptive
- sophisticated
- authoritative
- serious

Casual tone

- casual
 - relaxed
 - conversational
 - honest
 - informal
 - unreserved
-

ANALYSIS

Because ChatGPT-4 is machine learning-based, it does not have a prescribed formula for generating its output. It is trained on multiple data integration platforms and pulls from this information to answer your prompts. Looking at the differences between the original text and a ChatGPT-4 generated text gives us an idea of the linguistic variations that it uses and how they affect the reader.

I prompted ChatGPT-4 to analyze the original version of the job posting content and determine its tone of voice. Its output stated that the tone is “professional, informative, and slightly formal.”

Formal Version Analysis

I examined the formal version produced by ChatGPT-4 to see which linguistic variations were used.

- Original version:**
 We’re growing and looking for a passionate Technical Writer who can help enhance our Software Development, Infrastructure, and Security programs.
- GenAI version**
 As a leader in cybersecurity solutions, CEDENT is seeking a proficient Technical Writer to articulate and formalize the documentation that underpins our innovative data protection technologies

Tone of voice	Original version	GenAI version	Linguistic level	Specific form or pattern
Professional, slightly formal	<i>We’re growing</i>		Syntactic	Declarative sentence
Formal, authoritative, serious		<i>As a leader in cybersecurity solutions</i>	Syntactic	Sentence beginning with clause
Professional, slightly formal	<i>looking for a passionate Technical Writer who can help enhance</i>		Semantic/lexical	Register

Formal, authoritative, serious		<i>seeking a proficient Technical Writer to articulate and formalize the documentation</i>	Semantic/lexical	Register
Professional, slightly formal	1 sentence 20 words		Syntactic	Shorter sentence
Formal, authoritative, serious		1 sentence 26 words	Syntactic	Longer sentence

Table 2: Formal version: Tone of voice examples from Detailed Requirements/Objective sections of job postings

Table 2 above describes the variations between text in the original and formal (GenAI) versions. Linguistic variations employed by ChatGPT-4 are syntactic and semantic/lexical. The formal (GenAI) version contains more words and changes the syntax of the sentence by beginning with a clause. It also incorporates some synonyms for words (“proficient” vs. “passionate” and “enhance” vs. “articulate and formalize”) to account for different contextual situations.

- **Original version**
 - The Technical Writer reports to the CPO and will work within our Product organization alongside computer programmers, software engineers, QA engineers, and product managers to develop high-quality documentation that meets needs for customers, partners, third parties, and internal stakeholders.
- **GenAI version**
 - Engage collaboratively with our product teams to produce documentation that accurately reflects the capabilities and usage of our products, ensuring alignment with technical specifications and user expectations.
 - Provide documentation support for our executive team, contributing to the strategic documentation needs of our IT infrastructure and compliance with security mandates.

Tone of Voice	Original Version	GenAI Version	Linguistic level	Specific form or pattern
Professional, slightly formal	<i>The Technical Writer reports to</i>		Syntactic	Imperative vs. declarative sentence
Formal, authoritative, serious		<i>Engage collaboratively with our product team</i>	Syntactic	Imperative vs. declarative sentence
Professional, slightly formal	38 words 1 bullet point		Orthographic	Punctuation
Formal, authoritative, serious		2 bullet points 50 words total (28 words, 22 words)	Orthographic	Punctuation
Professional, slightly formal	<i>work within our Product organization...</i>		Semantic/lexical	Register
Formal, authoritative, serious		<i>Engage collaboratively with our product team</i>	Semantic/lexical	Register

Table 3: Formal version: Tone of voice examples from Description/Responsibilities sections of job postings

Table 3 above describes variations between text in the original and formal (GenAI) versions. The linguistic variations used by ChatGPT-4 are syntactic, orthographic, and semantic/lexical. The original version is longer than the formal (GenAI) version, and Chat GPT-4 split the one long bullet point in the original into two shorter bullet points in the formal (GenAI) version. Syntactic variations include using an imperative vs. declarative sentence for variation. The formal (GenAI) version has semantic/lexical variations (“work within” vs. “engage collaboratively”) for different contextual situations.

As I used ChatGPT-4 to create the formal version of the tone of voice, it would fill in the remainder of the job posting to complete it. In effect, it produced content that I did not request for my output.

Casual Version Analysis

I also examined the casual version produced by ChatGPT-4 to see which linguistic variations were used.

- Original version:**
 We're growing and looking for a passionate Technical Writer who can help enhance our Software Development, Infrastructure, and Security programs. You will be joining a team working on an exciting new cybersecurity and data protection product that will fundamentally change how people share and use data.
- GenAI version**
 Are you a wizard at writing tech docs? Excited about new tech, especially in the cybersecurity arena? We're looking for someone like you to help us document our latest venture in data protection – a product that's set to change the game!

Tone of voice	Original version	GenAI version	Linguistic level	Specific form or pattern
Casual, relaxed, conversational		<i>writing tech docs?, in the cybersecurity arena?, change the game?</i>	Orthographic	Punctuation
Professional, slightly formal	<i>cybersecurity and data protection product</i>		Semantic/lexical	Register
Casual, relaxed, conversational		<i>venture in data protection – a product that's set to change the game</i>	Semantic/lexical	Register
Professional, slightly formal	2 sentences 46 words		Syntactic	Longer sentences
Casual, relaxed, conversational		3 sentences 42 words	Syntactic	Shorter sentences

Table 4: Casual version: Tone of voice examples from Detailed Requirements/Join Our Team

Table 4 above describes text variations between original and casual (GenAI) versions. Linguistic variations employed by ChatGPT-4 are syntactic, orthographic, and semantic/lexical. The casual (GenAI) version contains fewer words. It also incorporates some synonyms for words (“cybersecurity and data protection product” vs. “data protection”) to account for different contextual situations. The casual (GenAI) version also uses questions as an orthographic linguistic variation to establish a more familiar and casual tone.

- Original version:**
 The successful candidate will also provide ongoing support to the CIO and CISO, through the documentation of IT infrastructure operations and for compliance & security requirements. The individual must be comfortable with a fast-paced and dynamic environment, and capable of working effectively as part of a team.
- GenAI version**
 Expect to work side-by-side with our savvy devs, engineers, and product gurus. You’ll also be a go-to resource for our CIO and CISO, documenting the nuts and bolts of our IT infrastructure.

Tone of voice	Original version	GenAI version	Linguistic level	Specific form or pattern
Professional, slightly formal	<i>part of a team</i>		Semantic/lexical	Register
Casual, relaxed, conversational		<i>with our savvy devs, engineers, and product gurus</i>	Semantic/lexical	Register
Professional, slightly formal	<i>documentation</i>		Morphological	Noun vs. verb
Casual, relaxed, conversational		<i>documenting</i>	Morphological	Noun vs. verb
Professional, slightly formal	2 sentences 47 words		Syntactic	Sentence length
Casual, relaxed, conversational		2 sentences 32 words	Syntactic	Sentence length

Table 5: Casual version: Tone of voice examples from Description and Your Teammate

Table 5 above describes the variations between sentences in the original and casual (GenAI) versions. Linguistic variations employed by ChatGPT-4 are semantic/lexical, morphological, and syntactic. The morphological variation of using “documenting” instead of “documentation” makes the generated text more casual. Also, the casual (GenAI) version incorporates some synonyms for words (“team” vs. “savvy devs, engineers, and product gurus”) to account for different contextual situations. Finally, the casual (GenAI) version changes the syntax of the sentence and makes it longer.

Readability Metrics

I calculated readability metrics for all three versions of the job posting content and included them in **Table 1** below. Each version is found in Appendix II: GenAI Output at the end of this document.

Original version	Formal version	Casual version
212 words	202 words	158 words
9 sentences	14 sentences	12 sentences
22.78 words per sentence	14.64 words per sentence	13.5 words per sentence
32.2% difficult words	40.98% difficult words	11.73% difficult words
11.24 Dale-Chall score	13.07 Dale-Chall score	8.2 Dale-Chall score
17.07 Flesch-Kincaid score	18.1 Flesch-Kincaid score	7.52 Flesch-Kincaid score
21.99 Gunning Fog score	22.25 Gunning Fog score	10.09 Gunning Fog score

Table 1: Readability metrics for tone of voice versions by ChatGPT-4

The original version has the most words and the fewest sentences. Its average sentence length is the longest of the three versions. As expected, the percentage of difficult words and reading scale scores fall between the formal and casual versions.

The formal version has fewer words and more sentences than the original. Its sentences are shorter than the original but longer than the casual version. The percentage of difficult words and reading scale scores are the highest of the three versions.

The casual version has the fewest words and the least words per sentence. It has more sentences than the original, and its average sentence length is shorter. As expected, the percentage of difficult words and reading scale scores are the lowest of the three versions.

Context and Attributions. For the formal version output, I prompted ChatGPT-4 to direct the job posting for placement on a Society for Technical Communication website to establish context. The linguistic variations from the original content made the formal version more complex for the reader, aligning with the STC audience. While the readers may be able to comprehend a more complex passage, their reading speed decreases while their focus must

increase. However, the semantic/lexical variations create more trust from the reader because the writer portrays good subject knowledge through language. Brand loyalty is reinforced when a reader trusts a writer, which is good for the organization.

For the casual version output, I prompted Chat GPT-4 to direct the job posting for placement on social media outlets to establish context. The linguistic variations from the original content made the casual version of the content less difficult for the reader, aligning with the audience on social media channels. These variations also resulted in fewer total words and a lower percentage of difficult words in this version. These semantic/lexical, orthographic, and syntactic changes create a more relatable, conversational version that pleases readers and delivers the information they need in a more familiar way. Readers will likely connect with a more casual version and pass it along or repost it. This can result in increased job marketing and awareness for the organization. A potential downside is an increase in unqualified job candidate applications, which costs time and money.

CONCLUSIONS

ChatGPT-4 is an effective tool for creating content with different tones of voice. It can take a large chunk of content and completely rewrite it in a different tone of voice in seconds. In my analysis, the output created for the formal version was better than the output for the casual version. Although the casual version is pleasing to read, the formal version output aligns with the tone of most job postings on mainstream job websites.

I found examples of four linguistic variations in the new content: semantic/lexical, syntactic, orthographic, and morphological. The one variation that I did not see is phonological. This variation has particular use cases, so its use would not necessarily add to the quality of the ChatGPT-4 output for this job posting.

There are many ways that ChatGPT-4 can contribute to a technical writer's workflow. One of the most valuable uses for ChatGPT-4 in technical writing is revising content to maintain a consistent tone. It is also extremely helpful in answering questions for general research (pre-writing) purposes because it can cut down on unhelpful search results and save time for the writer.

Chat GPT-4 is a good fit for technical writing because it generates output by pulling information from a large database it has curated from sources all over the internet. However, it is only as useful as it is up-to-date, and it is currently updated with data through 2023. Also, perhaps its biggest limitation is that it cannot generate original content. It is also more explanatory than argumentative. For these reasons, a mix of human and machine input is required to get the highest quality content.

Overall, ChatGPT-4 is useful for any step of the writing process. However, the more experience you have with tweaking your prompts to get your desired output, the better the quality will be.

APPENDIX I: GenAI PROMPTS

FORMAL VERSION

Prompt 1

You are a technical writer creating a job posting for your company. What is the tone for the following job description?

Technical Writer -Remote

Full-time CEDENT Dallas, TX

[begin]

Detailed Requirements:

We're growing and looking for a passionate Technical Writer who can help enhance our Software Development, Infrastructure, and Security programs. You will be joining a team working on an exciting new cybersecurity and data protection product that will fundamentally change how people share and use data.

Description of the role:

- ♣ The Technical Writer will join a small team who will lead the development and maintenance of documentation aimed to improve the adoption, implementation, and support of Client technology, as well as to formalize internal infrastructure operations and compliance/security requirements. Documentation may come in the form of user guides, integration manuals, API developer guides, architecture diagrams, installation/configuration instructions, system operations, release notes, procedures, and more.
- ♣ The Technical Writer reports to the CPO and will work within our Product organization alongside computer programmers, software engineers, QA engineers, and product managers to develop high-quality documentation that meets needs for customers, partners, third parties, and internal stakeholders.
- ♣ The successful candidate will also provide ongoing support to the CIO and CISO, through the documentation of IT infrastructure operations and for compliance & security requirements. The individual must be comfortable with a fast-paced and dynamic environment, and capable of working effectively as part of a team.

[end]

Prompt 2

I want to put this job posting to the Society for Technical Communication. Give me 2 different versions of the job posting that are more professional and descriptive than the original content.

Prompt 3

Take Version 1, reduce the content, and make the tone professional and sophisticated.

Prompt 4

Take Version 2 and reduce the content.

Prompt 5

Take Version 2 of the content and make it professional, authoritative, and serious.

CASUAL VERSION

Prompt 1

You are a technical writer creating a job posting for your company. How would you describe the tone of the following job posting?

Detailed Requirements: We're growing and looking for a passionate Technical Writer who can help enhance our Software Development, Infrastructure, and Security programs. You will be joining a team working on an exciting new cybersecurity and data protection product that will fundamentally change how people share and use data.

Description of the role:

- ♣ The Technical Writer will join a small team who will lead the development and maintenance of documentation aimed to improve the adoption, implementation, and support of Client technology, as well as to formalize internal infrastructure operations and compliance/security requirements. Documentation may come in the form of user guides, integration manuals, API developer guides, architecture diagrams, installation/configuration instructions, system operations, release notes, procedures, and more.
- ♣ The Technical Writer reports to the CPO and will work within our Product organization alongside computer programmers, software engineers, QA engineers, and product managers to develop high-quality documentation that meets needs for customers, partners, third parties, and internal stakeholders.
- ♣ The successful candidate will also provide ongoing support to the CIO and CISO, through the documentation of IT infrastructure operations and for compliance & security requirements. The individual must be comfortable with a fast-paced and dynamic environment, and capable of working effectively as part of a team.

Prompt 2

I want to post this job posting on social media. Give me 2 different versions of the content that are casual, relaxed, and conversational.

Prompt 3

Take Version 1 and make it casual, honest, and carefree.

Prompt 4

Take Version 2 and make it casual, informal, and unreserved.

APPENDIX II: GenAI OUTPUT

ORIGINAL VERSION

Detailed Requirements:

We're growing and looking for a passionate *Technical Writer* who can help enhance our Software Development, Infrastructure, and Security programs. You will be joining a team working on an exciting new cybersecurity and data protection product that will fundamentally change how people share and use data.

Description of the role:

- The Technical Writer will join a small team who will lead the development and maintenance of documentation aimed to improve the adoption, implementation, and support of Client technology, as well as to formalize internal infrastructure operations and compliance/security requirements. Documentation may come in the form of user guides, integration manuals, API developer guides, architecture diagrams, installation/configuration instructions, system operations, release notes, procedures, and more.
 - The Technical Writer reports to the CPO and will work within our Product organization alongside computer programmers, software engineers, QA engineers, and product managers to develop high-quality documentation that meets needs for customers, partners, third parties, and internal stakeholders.
 - The successful candidate will also provide ongoing support to the CIO and CISO, through the documentation of IT infrastructure operations and for compliance & security requirements. The individual must be comfortable with a fast-paced and dynamic environment, and capable of working effectively as part of a team.
-

FORMAL VERSION

Objective:

As a leader in cybersecurity solutions, CEDENT is seeking a proficient Technical Writer to articulate and formalize the documentation that underpins our innovative data protection technologies. This role is pivotal in ensuring the precision and efficacy of our product documentation, supporting both our strategic initiatives and daily operational requirements.

Responsibilities:

- Spearhead the creation and refinement of critical documentation, including software application guides, security protocols, and operational procedures.
- Engage collaboratively with our product teams to produce documentation that accurately reflects the capabilities and usage of our products, ensuring alignment with technical specifications and user expectations.
- Provide documentation support for our executive team, contributing to the strategic documentation needs of our IT infrastructure and compliance with security mandates.

Professional Qualifications:

- A minimum of five years' experience in technical writing, specifically within the domains of software development, cybersecurity, or IT infrastructure.
- Demonstrated ability to distill complex technical information into concise, impactful documentation.
- Proven competence in managing multiple documentation projects in a high-stakes, fast-paced environment.

Opportunity:

This position offers a formidable opportunity to influence the safety and integrity of data management on a global scale. At CEDENT, you will contribute directly to projects that elevate industry standards and enhance the security framework of enterprise-level operations.

CASUAL VERSION

Join Our Team as a Technical Writer!

Are you a wizard at writing tech docs? Excited about new tech, especially in the cybersecurity arena? We're looking for someone like you to help us document our latest venture in data protection – a product that's set to change the game!

Your Role: Jump into a friendly team that's focused on crafting clear, helpful documentation from user manuals to release notes. Your work will help our users and internal teams get the most out of our technology.

Your Teammates: Expect to work side-by-side with our savvy devs, engineers, and product gurus. You'll also be a go-to resource for our CIO and CISO, documenting the nuts and bolts of our IT infrastructure.

The Vibe: Fast-paced, ever-evolving, but always fun! We value team players who can keep pace with us as we grow.

Interested in being a part of something big? Shoot us a message or apply today to start the conversation!
