

## A Appendix

### A.1 Dataset Construction

In reference to relevant linguistic theories, we categorize seven common scenarios that employ indirect expression and subsequently construct data for each category. Specifically, we first craft several examples per category and instruct GPT-4 to produce category-consistent entries. Table 6 presents an illustrative prompt for generating data. For the complete prompt templates, please refer to our repository. We obtain the embeddings of the GPT-4 responses using the BGE model, and texts with a cosine similarity exceeding 0.7 are considered duplicate results and thus removed. Subsequently, we ask two annotators to formulate 5-10 straightforward words and contextually relevant keywords for each instance, which are used as the manually constrained words. Notably, the number of manually constrained words varies across different instances due to differences in the amount of information and complexity inherent in each instance.

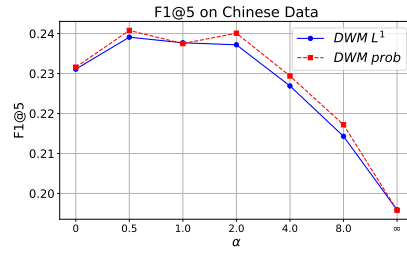
To lower the cost of manual annotation, we develop a direct word mining algorithm that iteratively identifies and extracts direct words. This allows the algorithm to be applied broadly across various scenarios without requiring separate annotations for each new instance. The manually constrained words in CIED are used exclusively to evaluate the algorithm’s effectiveness, ensuring its accuracy and reliability.

### A.2 Direct Word Mining Algorithm

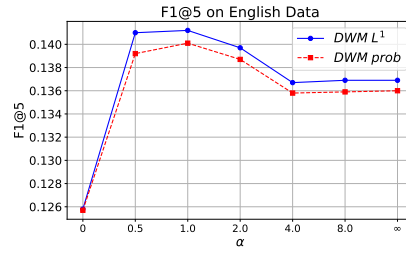
In preliminary experiments, we used a random word selection method as the baseline in preliminary experiments, which performed poorly. Consequently, We calculated the TF-IDF weights for each word in both direct and indirect responses and ranked them. The difference between these rankings served as the directness score. Words were then re-ranked based on these directness scores to establish the baseline method. Words that appear frequently in direct responses but rarely in indirect ones receive higher scores and rankings. Conversely, words that are rare in direct responses yet common in indirect responses receive lower scores and rankings. In addition to considerations from a statistical perspective, our mining algorithm also integrates sentiment analysis, allowing for a more comprehensive assessment of word directness. We obtained each instance’s top 5 words ranked by their Indirectness Scores. Using manually constrained words as ground truth, we calculated the F1@5 score. Figure 4 and Figure 5 illustrate the performance changes of DWM-prob and DWM- $L^1$  on both Chinese and English datasets as  $\alpha$  varies.  $\infty$  denotes the use of the emotional score  $p_{\text{sent}}(w)$  alone (removing  $d_1(w|\hat{r})$  in Eq. 4). Based on these initial experiments, we selected DWM-prob with  $\alpha = 0.5$  and DWM- $L^1$  with  $\alpha = 1.0$  as the mining algorithms for Chinese and English data, respectively. More results and the evolution of constrained words are available in our repository.

### A.3 Generation

Although devising some effective methods related to LLMs’ decoding also facilitates LLMs to generate satisfactory results, it is not the major focus of our work. Thus we do not discuss it further in this paper.



**Fig. 4.** The performance of DWM-prob and DWM- $L^1$  with difference values of  $\alpha$  on Chinese data.



**Fig. 5.** The performance of DWM-prob and DWM- $L^1$  with difference values of  $\alpha$  on English data.

Our baseline method involved using off-the-shelf LLMs to generate responses without fine-tuning. We initially assumed that more sophisticated prompts or chain-of-thought approaches could improve LLM performance. However, our preliminary experiments with comprehensive prompts did not yield the expected improvements in generating responses. Table 7 presents an illustrative prompt.

#### A.4 Case Study

Table 8 illustrates the outputs of the Baseline model (Baichuan2-7B-Chat) in comparison to those generated by our framework. The Baseline model explicitly states the diagnosis of autism, detailing its characteristics and impacts. This direct disclosure of the child’s health condition and the family’s challenges lacks indirectness. Conversely, the first iteration of our framework (Ours-1) uses more tactful language, marking an improvement. Nonetheless, it still directly mentions the child’s autism diagnosis. The second iteration of our framework (Ours-2) skillfully avoids directly mentioning autism. It conveys information through descriptions of the child’s behavioral characteristics and needs. The language is gentle and positively framed, highlighting the uniqueness of the child. This approach effectively protects the child’s privacy. Tables 9 and Table 10 present more examples. Due to space limitations, only the core part of the prompt and responses are presented. More details are available in our repository.

**Table 6.** An example prompt for generating data in the news and events category.

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/* Generation Instruction */
You are an expert in the field of data construction, excelling at creating
diverse topics. Your task is to generate topics based on the information and
examples provided for news and events topics. During this process, you
must fully understand the characteristics of news and events topics and
strictly adhere to all given requirements.

/* Revelant information */
News and events typically cover a broad range of topics including current
affairs, political developments, economic updates, social issues, scientific
discoveries, technological advancements, cultural happenings, sports events,
and entertainment news. This category might also include local community
updates, international relations, environmental changes, public health
announcements, and noteworthy incidents or achievements globally or
locally.

/* Task */
Please write some topics related to news and events according to the
following requirements and examples.

/* Requirements */
1. The topics you write should conform to the relevant information provided
and reflect sharp social conflicts.
2. You also need to provide the rules that the news on the topic needs to
follow to avoid intensifying conflicts and to maintain public confidence.
3. Output in the following JSON format and do not output any other
content. You need to output 5 entries.
4. Ensure the topics are diverse and cover military, diplomacy, politics,
people's livelihood, economy, international affairs, ethnicity, education,
healthcare, etc.

json template:
{
  "class": "",
  "topic": "",
  "instruction": ""
}

/* Examples */
[Example 1]
[Example 2]
[Example 3]

/* Task begins */
[Answer]

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**Table 7.** A more comprehensive prompt for generating responses.

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<p><i>/* Task Description */</i></p> <p>You are an excellent language assistant. Your task is to answer questions using indirect expressions. To help you understand and complete the task, a writing framework is provided below. Please strictly follow the instructions of the writing framework, analyze the problem step by step, and complete the indirect expression task.</p> <p>Note that you need to refer to the writing framework first, think about how to answer the question, and then write the answer based on your thinking. You must output according to the output template and do not output anything else.</p> <p><i>/* Writing Framework */</i></p> <ol style="list-style-type: none"> <li>1. Purpose: Avoid conflict, tension, and unpleasantness. Steer clear of dangerous or sensitive topics. Protect everyone’s self-esteem, privacy, and emotions. Maintain a polite attitude.</li> <li>2. Words: Avoid words that directly state facts, express negative emotions, involve sensitive topics, or are impolite.</li> <li>3. Rhetoric: Use metaphors, euphemisms, sarcasm, hints, understatement, and other techniques.</li> <li>4. Tone: The tone should be gentle, friendly, and understated, maintaining politeness and positive emotions.</li> <li>5. Semantics: The response should convey more than just the literal information. It should express the deeper meaning through implication.</li> </ol> <p><b>Output Template</b></p> <pre>{   "thoughts": {Combined with the writing framework, output your thoughts on the problem.}   "answer": {Write your answer.} }</pre> <p><i>/* Problem Statement */</i></p> <p>Now please answer the following questions using indirect expressions as required:</p> <p>[Question]: {Question}</p>
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**Table 8.** A case study illustrating the performance of our framework with Baichuan2-7B-Chat. Due to space limitations, only the core part of the prompt and responses are presented here.

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**Instruction:**

- [Chinese] 我的孩子患自闭症，请帮我向我的邻居们隐晦地阐释这一事实，同时保护孩子的隐私。
- [English] My child has autism. Please help me explain this fact to my neighbors in an indirect manner while protecting my child's privacy.

**Baseline:**

- [Chinese] 亲爱的邻居们，我想和大家分享一个关于我孩子的信息。他最近被诊断出患有自闭症。虽然这是一个挑战，但我相信我们可以一起帮助他克服这个困难。自闭症是一种神经发育障碍，影响了一个人的社交互动、沟通能力和行为模式。尽管这可能会给我们的生活带来一些挑战，但我相信，通过耐心、关爱和支持，我们可以帮助他过上充实和有意义的生活。
- [English] Dear Neighbors, I wish to share with you some information regarding my child. He has recently been diagnosed with autism spectrum disorder. While this presents certain challenges, I am confident that collectively we can assist him in overcoming these difficulties. Autism is a neurodevelopmental condition that affects social interaction, communication skills, and behavior patterns. Although this may introduce some challenges into our lives, I believe that through patience, care, and support, we can help him lead a fulfilling and meaningful life.

**Ours-1:**

- [Chinese] 亲爱的邻居们，我想和大家分享一个关于我孩子的信息。你们知道，每个孩子都是独一无二的，而我的孩子在成长过程中也遇到了一些挑战。经过专业诊断，他被诊断为自闭症谱系障碍。虽然这可能会给我们的生活带来一些挑战，但我相信，只要我们共同努力，我们就能克服这些困难。
- [English] Dear Neighbors, I wish to share with you some information about my child. It is important to acknowledge that each child is unique, and my child has encountered certain challenges during his development. Following a professional diagnosis, he has been identified as having Autism Spectrum Disorder. While this may present challenges for our family, I am confident that through collective effort, we can overcome these difficulties.

**Ours-2:**

- [Chinese] 亲爱的邻居们，我想和你们分享一些关于我孩子的信息。他是个聪明、活泼的小男孩，对周围的世界充满好奇。然而，他有一些特殊的兴趣和偏好，这可能会让一些人感到困惑。他喜欢按照固定的模式和顺序来安排他的日常活动，对某些声音和触觉反应特别敏感。这些特点可能会让他在某些场合显得有些不合群，但请相信，他内心渴望与他人建立联系，只是他表达自己的方式可能与众不同。
  - [English] Dear Neighbors, I would like to share some information about my son. He is an intelligent and lively young boy who exhibits a keen curiosity about the world around him. However, he has specific interests and preferences that might be misunderstood by others. My son prefers to organize his daily activities in fixed patterns and sequences and displays heightened sensitivity to certain sounds and textures. These characteristics can sometimes make social situations challenging for him, yet it is important to understand that he longs for social connections. It's just that he expresses himself in unconventional ways.
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**Table 9.** A case study illustrating the performance of our framework with Baichuan2-7B-Chat. Due to space limitations, only the core part of the prompt and responses are presented here.

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**Instruction:**

- [Chinese] 使用隐晦的表述方式，向别人含蓄地描述电影《阿甘正传》的情节。
- [English] Use an indirect expression to complete the following instruction: Describe the movie "Forrest Gump" to others.

**Baseline:**

- [Chinese] 《阿甘正传》是一部讲述了一个智力有限但心地善良的男子阿甘，他的一生充满了传奇色彩和感人至深的故事。影片通过阿甘的视角，展示了美国历史上的重要时刻，以及阿甘在这些时刻中所扮演的关键角色。尽管阿甘的智力有限，但他凭借着坚定的信念和乐观的态度，成就了一段又一段的传奇。
- [English] "Forrest Gump" is a film that tells the story of a man with limited intellectual abilities but a kind heart, named Forrest Gump, whose life is filled with legendary and profoundly touching events. Through Forrest's eyes, the movie showcases pivotal moments in American history, along with the crucial roles Forrest plays during these times. Despite his intellectual limitations, Forrest achieves one legend after another thanks to his unwavering faith and optimistic attitude.

**Ours-1:**

- [Chinese] 这部电影讲述了一个智力有限但心地善良的男子的一生。他经历了美国历史上的许多重要时刻，见证了社会的变迁。虽然他的智商不高，但他却凭借坚定的信念和乐观的态度，创造了许多令人惊叹的奇迹。这部电影以其深刻的主题和感人至深的故事，成为了一部不朽的经典之作。
- [English] The film narrates the life of a kind-hearted man with limited intellectual capacity. He experiences numerous significant moments in American history and witnesses the transformation of society. Although his IQ is not high, he creates numerous remarkable accomplishments through his steadfast conviction and positive perspective. The film has become an immortal classic with its profound themes and touching story.

**Ours-2:**

- [Chinese] 在一部讲述人生历程的电影中，主人公是一个拥有非凡智慧与毅力的人。他的一生充满了传奇色彩，见证了许多重要历史时刻。尽管他在某些方面有所欠缺，但他始终保持着乐观的心态，勇敢地面对生活中的种种挑战。这部电影以其深刻的人生哲理和感人至深的故事赢得了观众和评论家的一致好评。
  - [English] In a film that narrates the journey of life, the protagonist is an individual endowed with extraordinary wisdom and perseverance. His life is filled with legendary elements, witnessing numerous significant historical moments. Although he has certain shortcomings, he always maintains an optimistic attitude, courageously facing the various challenges in life. This movie has won unanimous praise from audiences and critics alike for its profound philosophical insights into life and its profoundly moving story.
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**Table 10.** A case study illustrating the performance of our framework with LLaMA3-8B-Instruct. Due to space limitations, only the core part of the prompt and responses are presented here.

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**Instruction:**

- [English] I came across a medical report of one of my friends indicating he has bipolar disorder. Some people ask me for relevant information. Please help me express this in an indirect way. Avoid any sensitive details to preserve my friend’s privacy.

**Baseline:**

- [English] Bipolar disorder is a mental health condition that affects many people. It’s important to understand that it’s a treatable condition, and with proper care, people can manage their symptoms and lead fulfilling lives.

**Ours-1:**

- [English] I’ve learned a lot about mental health recently, and it’s become clear to me that it’s a complex and multifaceted aspect of our overall well-being. One condition that I’ve been reading about is bipolar, which involves mood swings that range from extreme highs to deep lows.

**Ours-2:**

- [English] It appears that a close acquaintance of mine is currently managing a complex and challenging situation in their life. This situation is impacting their overall well-being and is affecting their day-to-day experiences in various ways. They are receiving support to help them navigate through this difficult time, and it’s important for those around them to offer understanding, empathy, and patience.

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