CAUSALLY MOTIVATED DIFFUSION SAMPLING FRAMEWORKS FOR HARNESSING CONTEXTUAL BIAS

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Figure 1: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

Figure 2: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

Figure 3: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

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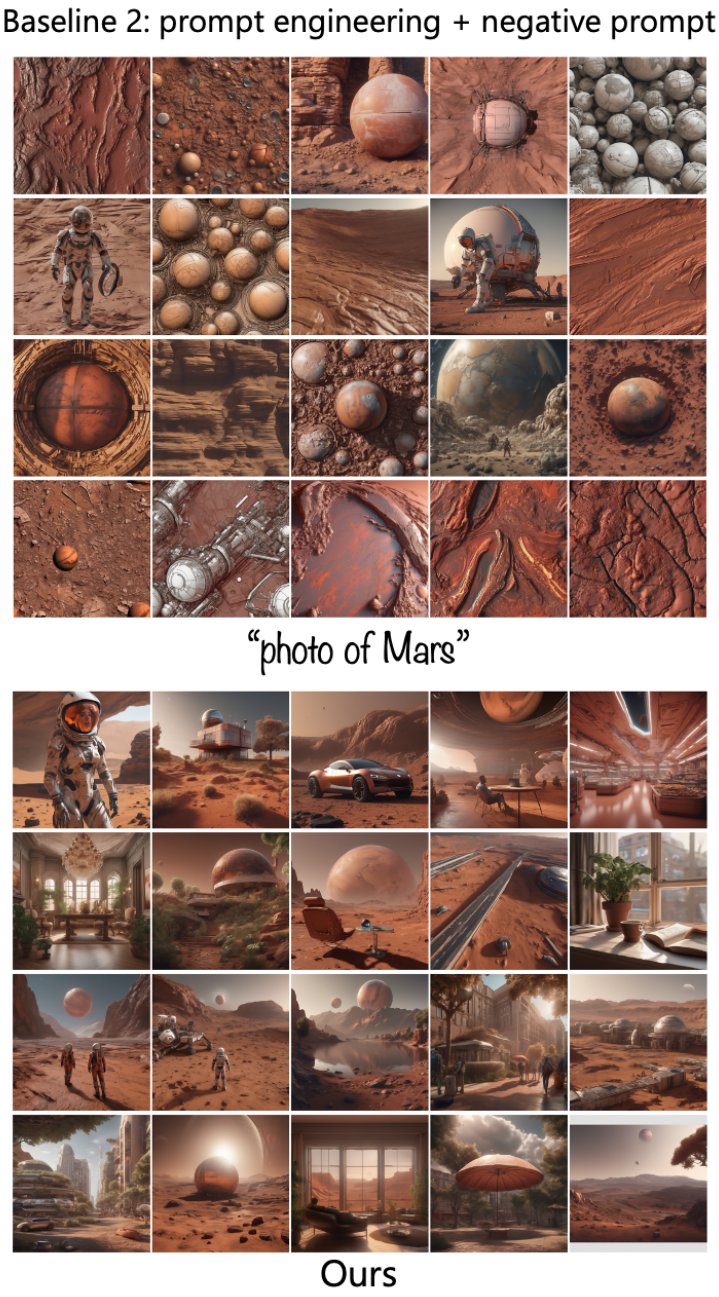

Figure 6: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

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Figure 11: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

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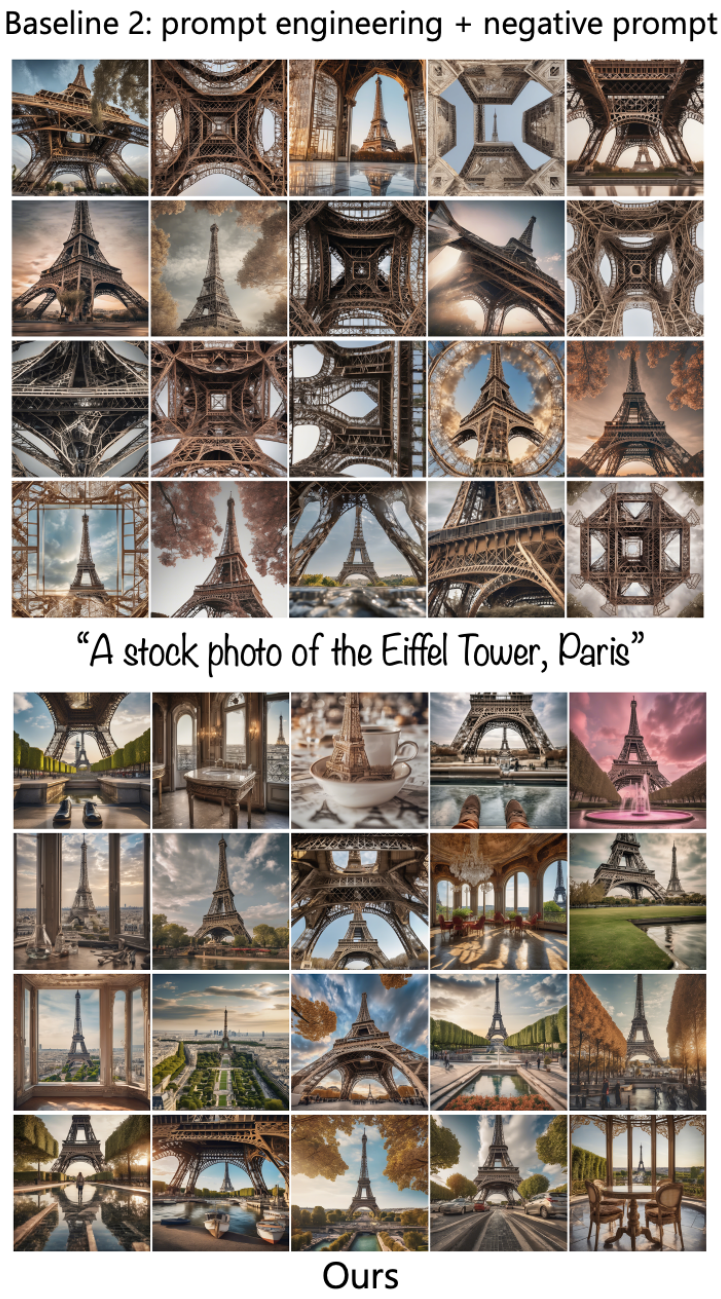

Figure 14: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

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Figure 16: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

Figure 17: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

Figure 18: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

Figure 19: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

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Figure 21: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

Figure 22: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

Figure 23: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

Figure 24: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.

Figure 25: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 1 is implemented by a simple prompt engineering. The query to Gemini is `f"briefly modify the given prompt to be creative. Answer in one sentence.: '{prompt}' "`. The engineered prompt is used as a text input.

Figure 26: Additional baseline comparisons. Here, we randomly sample 20 samples per prompt and per setting and show all of them without cherry picking. The Baseline 2 is implemented by prompt engineering and negative prompt techniques. The query to Gemini is `f"What would be the frequently co-occurring objects that can be likely placed in the scene generated by the given prompt '{prompt}'? Do not answer the words mentioned in the prompt. Answer 10 objects except for {important_obj} one line with comma."`, where `important_obj` is manually predefined as key object from the prompt. (e.g., "ancient dragon" from "A fantasy illustration of ancient dragon".) The answer is used as a negative prompt during the sampling process.