Linear Transformer Topological Masking with Graph Random Features

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Group id: ——
Project id: ——

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Abstract
Concise and self-contained description of your project, motivation and main findings.

GENERAL NOTES

The report should be written as an article intended to present the findings of your work. Your aim should be to be clear and objective, substantiating your claims with references or empirical/theoretical evidence. We are well aware of the fact that carrying out machine learning experiments might be difficult and that often the final performance might be disappointing. For this reason, you will not be evaluated solely on quantitative aspect of your work, but mainly on the quality of your analysis and report. The length of the report should be between 4 and 8 pages (without considering references).

Contents

1 Introduction

Here you should clarify the context of your project and the problem you are dealing with. You should also make a brief summary of the main results and contributions (i.e., if you tried to replicate the results of an existing paper you should say if you were successful or not). The introduction should help the reader to follow along for the rest of the paper.

2 Related works

Give a brief summary of (some) existing methods that are related to you project. For instance, you can refer to Reid et al. [1], or simply [1], for introducing Message Passing Neural Networks. In this section it is important to provide readers references to the current state of the art and the foundations of the presented method.

N.B.: When referencing a different approach, it is not necessary to provide a detailed description, only one/two brief sentences are enough. The interested readers can eventually read the referenced work.

3 Methodology

3.1 Time Complexity & Ablation Studies

3.2 VITS: Vision–Image Tasks (Graph + Image Integration)

3.3 PCTS: Point Cloud Temporal State prediction

4 Implementation

4.1 Time Complexity & Ablation Studies

4.2 VITS: Vision–Image Tasks (Graph + Image Integration)

4.3 PCTS: Point Cloud Temporal State prediction

5 Results

5.1 Time Complexity & Ablation Studies

5.2 VITS: Vision–Image Tasks (Graph + Image Integration)

5.3 PCTS: Point Cloud Temporal State prediction

6 Discussion and conclusion

Here you can express your judgments and draw your conclusions based on the evidences produced on the previous sections.

Try to summarize the achievements of your project and its limits, suggesting (when appropriate) possible extensions and future works.

References

[1] Isaac Reid, Kumar Avinava Dubey, Deepali Jain, William F Whitney, Amr Ahmed, Joshua Ainslie, Alex Bewley, Mithun George Jacob, Aranyak Mehta, David Rendleman, Connor Schenck, Richard E. Turner, René Wagner, Adrian Weller, and Krzysztof Marcin Choromanski. Linear transformer topological masking with graph random features. In *The Thirteenth International Conference on Learning Representations*, 2025. URL https://openreview.net/forum?id=6MBqQLp17E.