

# Test-Time Adaptation for Language Models

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## Abstract

We propose a novel algorithm for Test-Time Adaptation (TTA), Optimal Transport guided Test-Time Visual Prompting (OT-VP). This method aims to enhance the performance of pre-trained models when applied to previously unseen target tasks. Specifically, OT-VP employs Optimal Transport (OT) distance to learn a universal visual prompt, effectively aligning the distribution of the unseen target data with the source distribution, thereby facilitating more accurate model predictions. Upon evaluation, our approach demonstrates a significant improvement in accuracy. Furthermore, OT-VP consistently outperforms existing state-of-the-art TTA methods across three distinct datasets and in two different experimental settings, underscoring its robustness and effectiveness.

## 1 Introduction

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## 2 Related Work

Citations within the text appear in parentheses as (Aho and Ullman, 1972) or, if the author's name appears in the text itself, as Andrew and Gao (2007).

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## 3 Methods

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## 4 Results

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Table 1 shows a table. Note that we refer to output generated by `Experiments.ipynb`. This way, whenever we re-run our notebook, we can regenerate the paper with the latest results.

Figure 1 shows a figure

## 5 Discussion

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C	F1
0.1	0.90
1.0	0.92
5.0	0.93
10.0	0.89

Table 1: A caption.

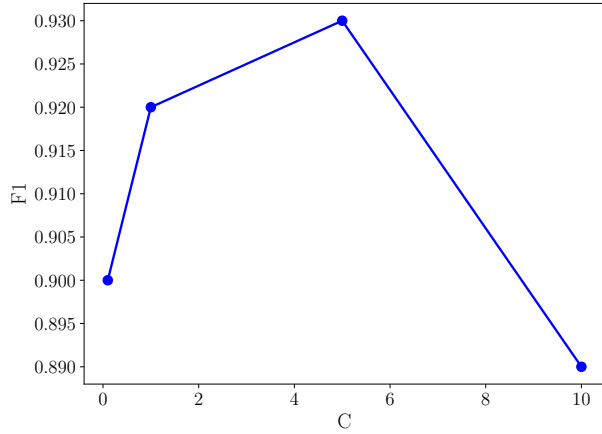


Figure 1: A caption

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## 6 Conclusion

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## 7 Division of Labor

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## References

- Alfred V. Aho and Jeffrey D. Ullman. 1972. *The Theory of Parsing, Translation and Compiling*, volume 1. Prentice-Hall, Englewood Cliffs, NJ.
- Galen Andrew and Jianfeng Gao. 2007. Scalable training of L1-regularized log-linear models. In *Proceedings of the 24th International Conference on Machine Learning*, pages 33–40.