

NeurIPS Paper Checklist

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Question: Do the main claims made in the abstract and introduction accurately reflect the paper's contributions and scope?

Answer: [\[Yes\]](#)

Justification: In the abstract, we claim we developed a theoretical grounded regularizer that improves DINOv2-small's interpretability, maintains performance when fine-tuning on natural images and improves performance when trained in medical data.

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Question: For each theoretical result, does the paper provide the full set of assumptions and a complete (and correct) proof?

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Justification: All our theorems are properly proved in the main paper or in Appendix. Same for needed mathematical definitions and related results.

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Question: Does the paper fully disclose all the information needed to reproduce the main experimental results of the paper to the extent that it affects the main claims and/or conclusions of the paper (regardless of whether the code and data are provided or not)?

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Justification: We describe in detail the regularization method in the corresponding Section, specifying that the training algorithm is the same as the one from DINOv2.

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Justification: The models presented in this paper were trained on public datasets, with the exception of the dataset presented by Eckardt et al. This dataset was used to train the OCT segmentation task, but cannot be released due to data privacy laws. Regarding code, well-documented code for reproducing our experiments will be released after acceptance to preserve anonymity. Same for the trained weights of the models presented here.

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