# Article information:

ST++: Make Self-trainingWork Better for Semi-supervised Semantic Segmentation | IEEE Conference Publication | IEEE Xplore  
<https://hfbic45521e79b0484907snnq65xokoqpn6n5cfiac.eds.tju.edu.cn/document/9880151>

# Article summary:

1. This article presents a strong baseline of self-training (ST) for semi-supervised semantic segmentation via injecting strong data augmentations (SDA) on unlabeled images.

2. The article further proposes an advanced self-training framework (ST++) that performs selective re-training via prioritizing reliable unlabeled images based on holistic prediction-level stability.

3. The article investigates the SDA and provides empirical analysis to demonstrate its effectiveness in improving performance.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is overall trustworthy and reliable, as it provides a detailed overview of the proposed ST++ framework for semi-supervised semantic segmentation, along with empirical evidence to support its claims. The authors have also provided code for their proposed method, which can be used to verify the results presented in the paper. Furthermore, the authors have provided a thorough analysis of the SDA and its effects on performance, which adds to the credibility of their work.

However, there are some potential biases in the article that should be noted. For example, while the authors provide evidence for their claims regarding ST++'s effectiveness in improving performance, they do not explore any counterarguments or alternative approaches that could potentially yield better results than ST++. Additionally, while they discuss possible risks associated with using ST++, they do not present both sides equally; instead, they focus more on highlighting the benefits of using ST++ rather than exploring potential drawbacks or limitations of this approach. Finally, there is some promotional content in the article as well; while this does not necessarily detract from its credibility or trustworthiness, it should still be noted as a potential bias in the paper's reporting.

# Topics for further research:

* Semi-supervised semantic segmentation
* Adversarial domain adaptation
* Self-training for semantic segmentation
* Domain adaptation techniques
* Advantages and disadvantages of ST++
* Limitations of semi-supervised learning

# Report location:

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