

Peer Review

Review of: "Undefinable True Target Learning: Towards Learning with Democratic Supervision"

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The main contribution of this manuscript is to define the framework of undefinable true target learning (UTTL). In this paper, the labeling information that is determined only by a domain expert is regarded as undemocratic supervision. On the other hand, the labeling information that is determined by both a domain expert and an AI expert is regarded as democratic supervision.

However, I am confused about the problem setting in this article. I have noticed the examples in the supplementary material. I still cannot get the essence of the problem setting. In these examples, data preparation includes domain expert labeling, AI expert refinement, and fusion of expert democracy. It is suggested to clearly demonstrate the difference between the obtained labeling information and the labeling information used in general machine learning (including supervised learning and weakly supervised learning). This is very important because this is the key idea of this article.

Note that if one learning setting needs to be studied, it must have potential application scenarios in our daily life (e.g., binary classification, multi-class classification). However, I cannot clearly get such information after reading this paper. It is suggested to start this paper with some intuitive examples that can clearly tell readers the importance and usefulness of the framework of undefinable true target learning (UTTL). This is my key comment for this paper.

Another minor suggestion is that too many abbreviations are used throughout this manuscript. For example, data preparation is abbreviated as DP, and learning procedure is abbreviated as LP. In my opinion, this is not necessary and will decrease the readability of the paper.

Declarations

Potential competing interests: No potential competing interests to declare.