Multi-label Text Classification for Dialogue System Development: Application to NPS Surveys

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Abstract:

Conversational systems are developing very rapidly, occupying a large part of the market of artificial intelligence usage in the domains. Classification of the client's intentions takes a vital role in many dialogue systems. Often, clients can have more than one intent in a phrase, and for this, a multi-label classification is used. Currently, multi-label classification tasks are solved using neural networks. However, the long time and large resources needed to train deep learning models make a high barrier for entry. In our work, we examined how the results of simpler models (Naive Bayes, Cat-Boost) differ from more complex language models (BERT) and what needs to be sacrificed when applying them to solve the task.

Keywords:

multi-label text classification, net promoter score, BERT, dialogue systems.