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Title

Evolution of content moderation approaches for online classifieds: From action recommendations to automation

Abstract

We propose a complex approach how to use machine learning algorithms to ensure content quality for online classified advertising platforms. We show how various text mining, deep learning and regression models can be trained and combined together to dramatically enhance capabilities of human moderation and partially automate their job. We show that it is crucial for models to output class probabilities to be able to start with weak predictors that only give action recommendations and then switch to partial automation when models become more accurate. We also provide accuracy comparison of several methods that we tested on real data. Finally we propose how to design such a human computation system to prevent its degeneration and how to test its efficiency. Our approach was successfully implemented at Avito.ru, one of the largest online classifieds in the world, which led to automation of 80% of all moderation actions.

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