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MIMIC: A Multi Input Micro-Influencers Classifier

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Abstract : Micro-influencers are effective elements in the marketing strategies of companies and institutions because of their capability to create an hyper-engaged audience around a specific topic of interest. In recent years, many scientific approaches and commercial tools have handled the task of detecting this type of social media users. These strategies adopt solutions ranging from rule based machine learning models to deep neural networks and graph analysis on text, images, and account information. This work compares the existing solutions and proposes an ensemble method to generalize them with different input data and social media platforms. The deployed solution combines deep learning models on unstructured data with statistical machine learning models on structured data. We retrieve both social media accounts information and multimedia posts on Twitter and Instagram. These data are mapped into feature vectors for an eXtreme Gradient Boosting (XGBoost) classifier. Sixty different topics have been analyzed to build a rule based gold standard dataset and to compare the performances of our approach against baseline classifiers. We prove the effectiveness of our work by comparing the accuracy, precision, recall, and f1 score of our model with different configurations and architectures. We obtained an accuracy of 0.91 with our best performing model.

Keywords : deep learning, gradient boosting, image processing, micro-influencers, NLP, social media
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