

Fake news is a problem in recent years. This study focuses on detecting fake news written in the Slovak language using text classification methods. It is unique because it is the first to conduct such a comprehensive set of experiments on Slovak. During the study, a balanced dataset was created, and over 80 experiments were conducted to find the optimal classifier for the problem. Pre-trained transformer-based language models, including BERT, mBERT, RoBERTa, XLM-RoBERTa, and SlovakBERT, were used in the initial step of the study, and their performance was compared against other machine learning methods using standard metrics. The models were fine-tuned with LIAR and COVID19 FN, English-language datasets, to test the impact of fake news topics and language transfer properties. SlovakBERT combined with training exclusively on Slovak datasets achieved the best results with an ($acc = 0.9610$). This study can contribute to the development of tools to automatically detect fake news in Slovak, aiding in the fight against the spread of false information.