

Language Technology in Combatting Propaganda: Master or Servant

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Abstract

Contemporary curricula in humanities in general and linguistics in particular make a special focus on the development of student skills in using language technology (LT). Nowadays, LT is used not only for collecting, processing, analyzing, presenting, and visualizing humanities data but also for monitoring sentiment, detecting fake news, combatting propaganda, and maintaining integrity and validity of news communication in the age of post-truth and ongoing information war. Simultaneously giving rise to the question who actually benefits from this synergy and if technology is always the best source of unbiased opinion. This accentuates the idea that apart from advanced IT skills necessary to use LT to solve various language data-related tasks, students need to be made aware of the role of humanities in shaping the value system of contemporary society, catering to the need to develop, sustain, and maintain humanistic values, develop civic society, and change the world through education.

The current research aims to analyze and assess the most efficient pedagogical practices implemented in both undergraduate and postgraduate education to develop advanced student skills in using LT alongside the development of their high-order cognitive skills necessary to assess validity, reliability and integrity of information they are exposed to. The authors hypothesize that understanding of the nature of manipulative communication, awareness of the differences between ideology and propaganda, and critical discourse analysis skills are the necessary preconditions for the masterful use of LT in the efficient processing of language data.

The authors reflect on student performance metrics they demonstrate in learning LT applications within the study courses “Machine Learning for Textual Data Processing” and “Digital Sentiment Analysis” developed within the framework of the project “Language Technology Initiative” (2.3.1.1.i./0/1/22/I/CFLA/002 LU Reg.No ESS2023/453) implemented in English in MOOC format at Riga Technical University. Students learn to detect manifestations of soft power and recognize attempts for agenda setting in news communications, develop understanding of the nature and traits of hate speech and cyberbullying and learn how to avoid and battle them, demonstrating compassion, empathy and critical thinking. Both qualitative and quantitative methods are used to assess student achievements in using IT-driven Critical Discourse Analysis (CDA) tools in detecting and flagshipping fake news, battling hate speech, conducting transparency and fact checks and critically assessing validity and integrity of news communication.

It is important to note that reliable mechanisms for detecting and eliminating hate speech and fake news are yet to be developed, since the existing technology still often fails to address all emerging issues. Interim research results allow observing that LT, including automated content analysis for battling propaganda, yields the best results when used alongside human oversight and conscious involvement to avoid algorithmic bias, misinterpretation, and possible technology hallucinations. Irrespective of the future human and IT interaction scenarios, critical thinking and analytic approach to information processing shall remain the values required to reduce the risk of being manipulated by disinformation, which calls for conscious and continuous development of versatile linguistic competence, including pragmatic, register and cultural awareness.