

## **Thesis:** Deception Detection Across Domains, Languages, and Modalities

**Abstract:** With the increase of deception and misinformation especially in social media, it has become crucial to be able to develop machine learning methods to automatically identify deception. In this dissertation, we identify key challenges underlying text-based deception detection in a cross-domain setting, where we do not have training data in the target domain. We analyze the differences between domains and as a result develop methods to improve cross-domain deception detection. We additionally develop approaches that take advantage of cross-lingual properties to support deception detection across languages. This involves the usage of either multilingual NLP models or translation models. Finally, to better understand multi-modal (text, image and speech) deception detection, we create strategies to assist in determining which modality is the most beneficial for detecting the truthful and deceptive classes.

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