Universiteit
Leiden
The Netherlands

Opinion diversity through hybrid intelligence

Meer, M.T. van der

Citation
Meer, M. T. van der. (2025, March 26). *Opinion diversity through hybrid intelligence*. *SIKS Dissertation Series*. Retrieved from https://hdl.handle.net/1887/4209024

Version:	Publisher's Version
License:	Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden
Downloaded from:	https://hdl.handle.net/1887/4209024

Note: To cite this publication please use the final published version (if applicable).

I

NLP for Online Discussion Analysis

Introducing Part I: NLP for Online Discussion Analysis

In Part I of this dissertation, we dive into the application of LLMs to analyze the perspectives in online societal discussions. Our work centers on argumentation: the rationales behind human opinions. In Chapter 2, we begin by examining the diversity of the opinions in LLM-generated summaries of argumentative content. We find that automated methods for summarizing arguments struggle to represent arguments shared by few people, and such error cases usually go unnoticed using standard NLP evaluation practices. By examining how LLMs fare on complex argument quality assessment tasks under strong data constraints in Chapter 3, we aim to further investigate how we can best deal with low-resource settings. Zero-shot prompting of LLMs can drive the state-of-the-art under realistic data constraints but still incur significant costs and highlight how diverse data improves their effectiveness in generalization to novel contexts. Overall, numerous challenges emerge when applying LLMs to tasks of analyzing opinionated data at scale. Later, in Part II, we will argue that the aforementioned challenges can be overcome by using LLMs to **assist humans** in mining opinionated text data, rather than replacing them.

Part I focuses on the following research question:

Q1 What are the fundamental issues in using NLP to analyze perspectives?