Report on the outcomes of a Short-Term Scientific Mission[1]

Action number: CA21129

Grantee name: Anke Stoll

Details of the STSM

Title: Research stay at the Department of Language, Literature and Communication Vrije Universiteit Amsterdam

Start and end date: 01/03/2025 to 30/03/2025

Description of the work carried out during the STSM

While traditional approaches to text classification, such as fine-tuning, suggest significant impact of factors like contextual relevance of training data, the latest generation of large language models (LLMs) enables in-context learning with only a few examples (few-shot learning), offering comparable or even superior performance.

During my research stay at the Department of Language, Literature and Communication at Vrije Universiteit Amsterdam (VU), I initiated a project that examines how few-shot learning examples—reflecting differing opinions from annotators with diverse backgrounds—affect the classification of arguments, as well as respectful and offensive language. I am conducting this project in collaboration with my host at VU, Damian Trilling, and with Anne Kroon and Christel van Eck from the University of Amsterdam (UvA), who developed the dataset of climate change conversations on X (formerly Twitter) that we will use for our analysis. This specific dataset allows for an advanced research design, as it includes annotated examples from various annotator groups (e.g., different genders). In contrast, the Stance Detection Dataset and Model for Dutch Political News by van Atteveldt and colleague, which I had initially planned to use, does not contain such demographic information.

Two additional projects were initiated during my stay, both of which will contribute valuable insights toward the objectives of the OPINION network. One of these projects also focuses on the impact of annotator background on classification outcome, but it employs a different dataset that is annotated for political viewpoint, sentiment, misinformation, and toxicity. I plan to carry out this project in collaboration with Anne Kroon, Marthe Möller, Toni van der Meer, and Kasper Welbers from the UvA and Damian Trilling. Lastly, a third study is planned in collaboration with Damian Trilling, as well as Sjoerd and Mark Boukes from UvA. This project will examine the impact of annotation error patterns on the classification of opinions in online debates. The study will use a dataset of annotated user comments from YouTube and X, alongside data simulation techniques to explore these effects.

To lay the groundwork for these projects, I engaged in conceptual development in close collaboration with my co-authors and worked on identifying, exploring, and preparing the relevant datasets to meet the specific needs of each study. This research process was preceded by networking activities aimed at identifying suitable research

[1] This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

partners and establishing collaborative relationships. In addition to the project work, I also participated in several complementary activities during my stay:

- Attending the weekly research colloquium of the political communication science department at VU (PolCom)
- Presenting my own research at the PolCom research colloquium
- Attending the Data Science Seminar lecture series on LLM Bias (UvA)
- Attending the Digilab round table on data collection for computational analyses (UvA)
- I have spoken to many researchers from VU and UvA about my and their work, including: Wouter van Atteveldt, Mark Boukes, Sofia Gil-Clavel, Johannes Gruber, Rupert Kiddle, Tim Groot Kormelink, Anne Kroon, Kenza Lamot, Felicia Löcherbach, Silvia Majo Vazquez, Marthe Möller, Myrthe Reuver, Sjoerd Stolwijk, Damian Trilling, Mariken van der Velden.

Description of the STSM main achievements and planned follow-up activities

During my research stay, I initiated several research projects situated at the intersection of computational communication science, artificial intelligence (AI)/machine learning (ML) bias, and political communication. These projects are expected to lead to multiple conference submissions and journal publications. As part of the joint research projects, I aim to contribute valuable insights into advanced methodologies for the automated measurement of opinionated text, aligning with the objectives of the OPINION working group. Additionally, I significantly expanded my professional network by engaging with experts whose work advances shared research interests in the computational analysis of opinionated discourse and related constructs. This network not only supports collaborative efforts in the field but will also be instrumental for the progression of my individual academic career. I am confident that these fruitful connections will foster further collaborations in the future, driving continued innovation and progress within this area of research.