**1 Introduction**

What kind of legislation the European Parliament (EP) adopts or rejects can have wide-ranging implications, not only for over 500 million citizens of the European Union but also third-country individuals and companies of states with which the European Union has political or economic relations. The Digital Markets and Services Acts (2022), that regulates the data use of any company whose products are available in the European Union or the Corporate Sustainability Due Diligence Directive (2024), which obliges companies to display how they ensure human rights in their supply chain anywhere in the world are remarkable examples from recent years.

The legislation proposed by the European Parliament in a last step before the Parliament consigns it to the European Council, is the result of coalesced political views and of a many steps negotiation process. It includes finding a majority or consensus between the members of Parliament in the responsible committee, the party groups that propose amendments to the legislation and the whole plenary of members of Parliament that decides on the final act. The outcome is a text that is dense in political meaning, subtle political direction, and compromises.

Although the European Parliament publishes every single vote and amendment proposed to legislation on their websites, it is often not clear, with which majority a law came to be. The information online is stored in many different places following a rather technical approach without an overview, which makes it not easy not find. Additionally, the language of legislation and the implications of slight changes in wording, adding or deletion of sentences is not easily understandable to laymen. Surveys repeatedly show that EU citizens do not feel their voice being heard in the process of law making or them being dissatisfied with the way democracy is working in the EU (Ipsos, 2023). Various pojects have hence tried to make the influence of party groups in the EU legislative process more traceable, see VoteWatch (Hix & Doru, 2024) or TrackmyEU (Girardelli & Kergueno, 2023).

Research on detecting political direction in text addresses the topic from a different angle and with various approaches. Some authors try to identify policy positions with traditional textual content analysis with hand-coded coding schemes e.g. in the Manifesto project (Budge et al., 2001), others consider words and word frequencies as data to quantitatively compare to other political texts (Laver et al., 2003). In more recent years, machine learning methods (Hajare et al., 2021) and Recurrent Neural Networks (Iyyer et al., 2014) have been added to the range of method.

Exciting possibilities have opened to the research field with the availability of Large Language Models (LLMs). In the neighbouring field of sentiment detection in political texts, LLMs have already been used to detect sentiment in tweets, speeches, or policy reports (Carlson & Montgomery, 2017; Widmann & Wich, 2023). Some studies have also showed results in applying LLMs to the task of political stance detection such as Bakker et al. (2022), Gül et al. (2024), and Heseltine & Clemm von Hohenberg (2024) but less has been explored.

Because of the generalised nature of most LLMs, much research has gone into optimization methods to improve the capabilities of the LLMs for specific tasks. Fine-tuning as the process of training a pre-trained model on a down-stream task is one of them and has been used in the field of political stance detection to… However, little of the authors apply their research on European legislation.

This research aims to contribute to bridging this thematic research gap and tries to advance the use of fine-tuned LLMs in the field of political stance detection. It addresses two main research questions:

**RQ1:** To what extent can fine-tuning improve the LLM’s capability to recognize which party supports a law?

**RQ2:** To what extent can a fine-tuned LLM generate amendments to a legislation that make the law more consensual or of counterfactual majority support?

The first question is the focus of this thesis, and to approach it, ChatGPT3.5 is trained on approval rates of existing legislation to correctly identify the political direction in the texts. The second RQ explores how the resulting fine-tuned model of RQ1 can be applied and how the generating nature of ChatGPT as an LLM can be exploited. For this purpose, the fine-tuned classifier model is further fine-tuned using rejected amendments of oppositional political parties to generate counterfactual versions of the legislation.

The second RQ builds on research which shows how fine-tuned LLMs have been used to produce text of specialised content and form in an unseen manner, e.g. generating patent claims (Lee & Hsiang, 2020). In the political science realm, Bakker et al. showed that an LLM can generate political consensus using fine-tuning and a reward model that leads to consensus which is preferred by humans over human generated consensus. Fine-tuning has been proven to show improved performance in a variety of generation tasks, including altering and debiasing political bias in text (Chen et al., 2018; Schlicht et al., 2024).

Following this outline, this research contributes to the existing methods on fine-tuning by applying them to the use case of recognizing and reproducing political direction in text. This thesis’ contribution further lies in its aim to increase transparency of decision-making and finding consensus on legislation in the EP.

This research aims to quantitatively analyse the added value fine-tuned LLMs can bring to detecting political direction in proposed legislation. Applying this to the case of the European Parliament, it focuses on the detection of support of political majorities for a given bill, including support that reaches near-consensus. The research further aims to qualitatively explore the performance of fine-tuned LLMs to generate counterfactual representation of political views in texts. This is operationalised by generating legislation with opposing majority support or higher consensual support. For both research questions, legislative proposals and meta data of votes of the European Parliament is used.

This paper is organised as follows. Section 2 gives an overview of existing literature; section 3 describes the data and methodology of both fine-tuning and text generation. Section 4 analyses the results of classification quantitatively and of the text generation qualitatively. In section 5, the results are discussed, in section 6, a conclusion is given.