Using Retrieval Augmented Generation and Knowledge Graphs to Understand Climate Obstruction

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*Abstract*—Climate change is one of the most serious crises the human race has ever faced. However, unlike previous crises such as the destruction of the ozone layer, the world has not come together to address the issue. At times this has been blamed on poor science communication. However, social scientists have realized that in reality the primary problem is that large corporations with vested interests in fossil fuels have orchestrated a campaign of disinformation and obfuscation which social scientists have labelled Climate Obstruction. This project is an attempt to collect the various resources (e.g., papers, databases, news articles) about Climate Obstruction into a knowledge graph using a Large Language Model as the user interface via a Retrieval Augmented Generation architecture. At a minimum, such a system provides a tool for researchers to have all the data in one location accessible via a natural language user interface. A long term goal is to use the rigor and logical foundation of the knowledge graph defined on a logical model using the Web Ontology Language (OWL) to rigorously define climate obstruction models that can be tested against data. I.e., to make the social science behind the analysis of Climate Obstruction a truly rigorous science.

Keywords — climate obstruction, Retrieval Augmented Generation (RAG), knowledge graph, Web Ontology Language (OWL), Large Language Model (LLM)

# Introduction

Climatechange is one of the most serious crises the human race has ever faced. However, unlike previous crises such as the destruction of the ozone layer, the world has not come together to address the issue. At times this has been blamed on poor science communication [1] [2]. However, social scientists have realized that in reality the primary problem is that large corporations with vested interests in fossil fuels have orchestrated a campaign of disinformation and obfuscation which social scientists have labelled Climate Obstruction [2].

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*a**b* 

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##### Acknowledgment

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##### References

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