T5 –

transformer models like BERT, RoBERTa, DistilBERT, ALBERT, and ELECTRA are used to classify entities related to supply chain risks . Among the evaluated models, RoBERTa achieved the highest average F1 score of 0.8580 . findings highlight the potential of NLP-driven solutions to revolutionize SCRM, particularly in geo-specific settings

Bart -

Transformer-Based Named Entity Recognition in Construction Supply Chain Risk Management in Australia. RoBERTa achieved the highest average F1 score of 0.8580, demonstrating its superior balance in precision and recall for NER in the Australian construction supply chain context. Our findings highlight the potential of NLP-driven solutions to revolutionize SCRM, particularly in geo-specific settings

Gemini -

Transformer models were evaluated for Named Entity Recognition (NER) in construction supply chain risk management in Australia. RoBERTa achieved the highest average F1 score of 0.8580, indicating its superiority for NER in this context. This study demonstrates the potential of NLP-driven solutions to enhance SCRM by identifying and classifying supply chain risk-related entities from news articles.

Gpt - 4

In recent years, the growing field of Natural Language Processing (NLP) has significantly impacted various industries, including the construction sector in Australia. Effective supply chain risk management (SCRM) is crucial in this industry due to its intricate networks and high exposure to diverse risks. This study delves into the utilization of advanced transformer models such as BERT, RoBERTa, DistilBERT, ALBERT, and ELECTRA specifically for Named Entity Recognition (NER) within the context of SCRM.

The research primarily focused on analyzing news articles to detect and categorize entities associated with supply chain risks. This approach aids in uncovering vulnerabilities prevalent in the Australian construction industry's supply chain. Among the transformer models evaluated, RoBERTa stood out by achieving the highest average F1 score of 0.8580. This score indicates RoBERTa's exceptional ability to maintain a balance between precision and recall, making it particularly effective for NER tasks in this specialized domain.

The findings from this study underscore the transformative potential of NLP-driven technologies in revolutionizing SCRM, especially in geographically specific contexts like Australia. By leveraging such sophisticated models, stakeholders in the construction industry can gain deeper insights into potential risks, enhancing their ability to strategize and mitigate adverse impacts effectively. This research not only contributes to the academic understanding of applying NLP in practical, industry-specific problems but also opens avenues for further exploration into the integration of AI technologies in managing complex supply chains more resiliently.

Gpt 3

This study delves into the significance of effective supply chain risk management (SCRM) in the Australian construction industry, given its intricate networks and exposure to diverse risks. By leveraging transformer models such as BERT, RoBERTa, DistilBERT, ALBERT, and ELECTRA, the research focuses on Named Entity Recognition (NER) to identify and categorize entities associated with supply chain risks by analyzing news articles. Among the models assessed, RoBERTa stands out with the highest average F1 score of 0.8580, showcasing its exceptional precision and recall balance for NER within the Australian construction supply chain domain. The study's outcomes underscore the transformative potential of NLP-driven solutions in revolutionizing SCRM, especially in specific geographic contexts. This research sheds light on the vulnerabilities present in the construction supply chain sector and emphasizes the critical role of advanced NLP techniques in enhancing risk management practices. By employing state-of-the-art transformer models, this study not only enhances our understanding of SCRM complexities but also paves the way for innovative approaches to mitigate risks and bolster resilience in the Australian construction industry.