User

There is a piece of text with two events, and your task is to identify four types of relations between them ...

Text:
A large **FIRE** broke out at the Waitrose supermarket in Wellington's High Street, half of the roof at the entrance of the store **collapsed** during the blaze.

LLM - Thought

From the text, we could first get: "FIRE" causes the store to ``collapsed''.

Due to the logic constraint: *if event A CAUSEs event B, then event A happens BEFORE or OVERLAP event B, and they won't have coreference and subevent relations ...*

We can deduce that the answers are:

+ *Logical Constraints*

Coreference Relation – – NO_COREFERENCE
Temporal Relation – – – OVERLAP
Causal Relation – – – – CAUSE
Subevent Relation – – – NO_SUBEVENT

Output Answers

(a) Generative-based

Logical Set

There are some rules among the relations, you can select some of them to reason or check your answers:
(1) *If two events are COREFERENCE, then they won't have temporal, causal, and subevent ...*
(2) *...*

Detect Conflicts

NO_COREFERENCE
SIMULTANEOUS
CAUSE
NO_SUBEVENT

Original Answers

Retrieval or *Post-processing*

SIMULTANEOUS ↓ OVERLAP

Conflict-free Answers

(b) Retrieval-based

LLM-LR Dataset

Context:
Given that event A and event B are COREFERENCE, event B and event C are COREFERENCE.
Question:
Based on the above information, what are the four types of relations between event A and C?
Answers:
COREFERENCE, NO_TEMPORAL, NO_CAUSAL, NO_SUBEVENT.

Pre-training

Specialized LLMs

Generate

NO_COREFERENCE
OVERLAP
CAUSE
NO_SUBEVENT

Output Answers

(c) Pretraining-based