Information Retrieval & Text Mining

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2023-2024

Project 2

SemEval-2024: Task 3

ECAC (SemEval-2024 Task 3)

Organized by Fan1834 - Current server time: Dec. 6, 2023, 1:58 p.m. UTC

▶ Current	Next	End
Practice	Evaluation	Competition Ends
Dec. 1, 2023, noon UTC	Jan. 10, 2024, noon UTC	Never

SemEval-2024 Task 3: The Competition of Multimodal Emotion Cause Analysis in Conversations (ECAC)

Visit our task website: SemEval-2024_ECAC; Join the mailing group: ECF_ECA@googlegroups.com.

Please fill in your registered user information on the online form!

The ability to understand emotions is an essential component of human-like artificial intelligence, as emotions greatly influence human cognition, decision-making, and social interactions. Emotion Cause Analysis, the task of identifying the potential causes behind an individual's emotional state, is of great importance.

Based on the multimodal conversational emotion cause dataset we built, we define the following two subtasks:

Subtask 1: Textual Emotion-Cause Pair Extraction in Conversations

- **Task definition:** Extracting all emotion-cause pairs from the given conversation solely based on text, where the emotion cause is defined and annotated as a textual span.
  - Input: a conversation containing the speaker and the text of each utterance
  - Output: all emotion-cause pairs, where each pair contains an emotion utterance along with its emotion category and the textual cause span in a specific cause utterance, e.g., `(3_joy, 2_You made up!)`. The emotion category should be one of Ekman's six basic emotions including *Anger*, *Disgust*, *Fear*, *Joy*, *Sadness* and *Surprise*. * Note: There may be multiple cause spans corresponding to the same emotion

Subtask 0: Emotion Extraction in Conversations

- You will receive a train set with 1030 conversations and a test set containing 344 conversations having less than 40 remarks each.
- Classify each utterance into one of the 7 basic emotions:

  Anger, Disgust, Fear, Joy, Sadness, Surprise or Neutral

Subtask 1: Textual Emotion-Cause Pair Extraction in Conversations

Considering the same dataset, identify all emotion-cause pairs, where each pair contains an emotion utterance along with its emotion category and the textual cause span in a specific cause utterance, e.g: (3_joy, 2_You made up!)

Subtask 1: Textual Emotion-Cause Pair Extraction in Conversations

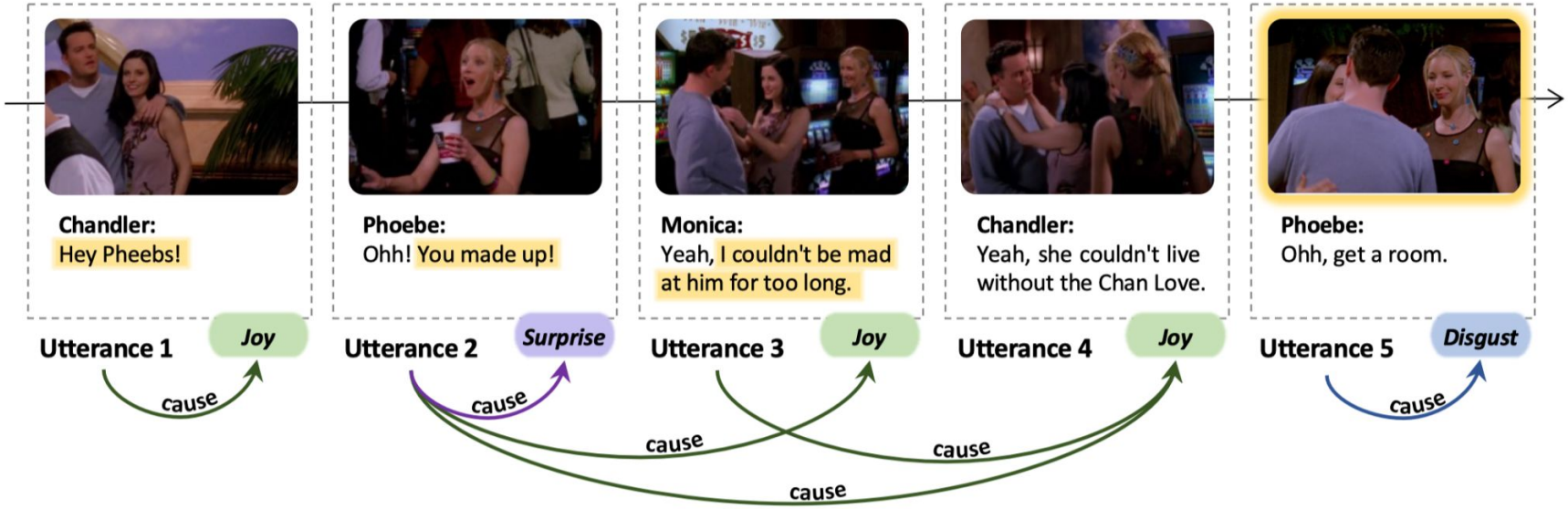

Figure 1: An example of our task and annotated dataset. Each arc points from the cause utterance to the emotion it triggers. The cause spans have been highlighted in yellow. Background: Chandler and his girlfriend Monica walked into the casino (they had a quarrel earlier but made up soon), and then started a conversation with Phoebe.

The Dataset - Subtask 0


```
"conversation_ID": 5,
"conversation": [
        {
                "utterance_ID": 1,
                "text": "Oh , look , wish me luck !",
                "speaker": "Rachel",
                "emotion": "joy"
        },
        {
                "utterance_ID": 2,
                "text": "What for ?",
                "speaker": "Monica",
                "emotion": "neutral"
        },
        {
                "utterance_ID": 3,
                "text": "I am gonna go get one of those job things .",
                "speaker": "Rachel",
                "emotion": "joy"
        }
]
```

The Dataset - Subtask 1


```
"conversation_ID": 5,
"conversation": [
        {
                "utterance_ID": 1,
                "text": "Oh , look , wish me luck !",
                "speaker": "Rachel",
                "emotion": "joy"
        },
        {
                "utterance_ID": 2,
                "text": "What for ?",
                "speaker": "Monica",
                "emotion": "neutral"
        },
        {
                "utterance_ID": 3,
                "text": "I am gonna go get one of those job
things .",
                "speaker": "Rachel",
                "emotion": "joy"
        }
]
```

```
"emotion-cause_pairs": [
        [
                "1_joy",
                "3_I am gonna go get one of those job things ."
        ],
        [
                "3_joy",
                "3_I am gonna go get one of those job things ."
        ]
        ]
```

The Task

- Solve both Subtask 0 and Subtask 1
- Look at the data
- Try different features: content words (BOW, word embeddings), stylistic markers (stop words) etc.
- Try different learning algorithm
- Find good combinations
- Don’t overfit (report results on (cross)validation and test)

Deliverables

- Research Report: document everything you tried and results obtained
- Code

Competition Deadline: 20th January 2024

Project Deadline: 25th January 2024

Q&A