Humour Generation and Analysis - A Project Scope

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Introduction:
Humour Analysis as a field has a lot of challenges. The core questions don't have any concrete answers, and a "Theory of Humour" (a form of unified ideology of what Humour is), is still some steps away from being framed. This makes it an extremely challenging, and a very interesting field as a lot of work can be done in it. The core motivation lies in using our knowledge of Linguistics, alongside Computational tools, to be able to analyze humour as learnt by various models.

Motivation:
Humour is very context-dependent, and isolating them does not make sense. Rule-based approaches work well since the grammar is maintained and they arise directly from personal understanding, but have the drawbacks which a weighted statistical model, or a model nuanced Neural Network might resolve. Thus, a mutl-faceted approach can give insights on Humour, while preserving context in form of a punchline generator is an appropriate task since Humour Generation systems would be expected to progress in that direction.

Methodology:
Given an input string X, generate a humorous response Y.
The core principle of this methodology will work on the classic Incongruity Theory, and borrow design from the General Theory of Verbal Humour (GTVH) for its concreteness.
Forms:

1. Rule Based (preserve the core components, utilize wordnet similarity to understand where humorous words are coming from, will be template based)
2. Statistical (a weighted model which will probably be a ngrams, using more nuanced weighted Markov Chains to generate appropriate words)
3. Neural Network, would involve Transformers and pre-trained models like BERT or GPT, with possible Bi-LSTM architectures to generate the punchline

Expectation:
We expect to be able to generate punchlines that would generate coherent sentences, and with a large number of them, we could see many that would be jokes. In such a case, we

expect to learn and analyse from those specific places where our models worked, and use the understanding in each level to improve the other.

References:

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