

Emotion Detection in Dialog Systems: Panel Contribution

What is an emotion?

Challenges

- “everyone except a psychologist knows what an emotion is”, probably Young (1973)
- So, what is “anger” with respect to our automated call center?
- Human’s don’t know
- We don’t care (and that’s why “emotion” is not a good word for it)



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What is an emotion?

Strategies

- “emotion” dictated by application
- “multi purpose emotion annotation”?
- Work on procedures for multi labeler annotation

- Developing labeler tools
- Emotional Markup Language

<http://www.w3.org/2005/Incubator/emotion/>



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Strange data

Challenges

- The speech signal is of low bandwidth, often coded by a GSM codec and disturbed by noisy environments so feature extraction is error-prone.
- The dialog-turns are typically short, often consisting of only a very limited set of command words.
- People don't need to follow the politeness rules that apply for human-human dialogs but address machines in an inherently unfriendly "bossy" undertone.
- People tend to over-pronounce, speak slow and loud or even in a "robot-like" manner due to the erroneous belief that this will ease the automatic speech recognition.
- In many applications customers call with some kind of complaint in mind and tend to speak with quite a negative undertone irrespective of problems that may result from the interaction



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Strange data

Strategies

- Always use original training data (egg-hen problem)
- Use words in addition to acoustics
- Use background knowledge on speaker



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Intelligence Problem

Challenges

- What to do with the recognized anger?
- Emotional behavior implies intelligence

Strategies

- Start with non-critical applications, e.g. gaming, customer statistics
- Use conservative strategies as system reaction

