Thoughts

Personal sentiment tracking & analysis

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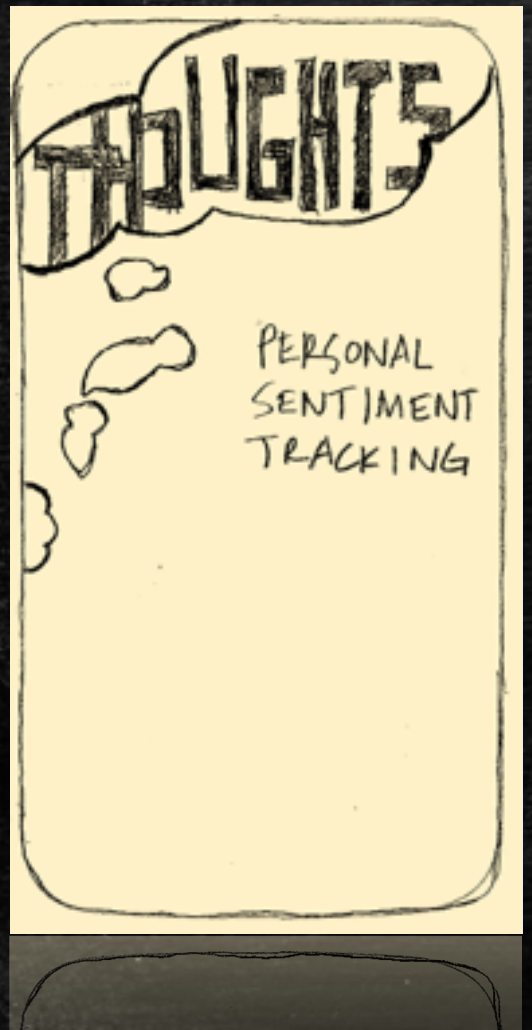
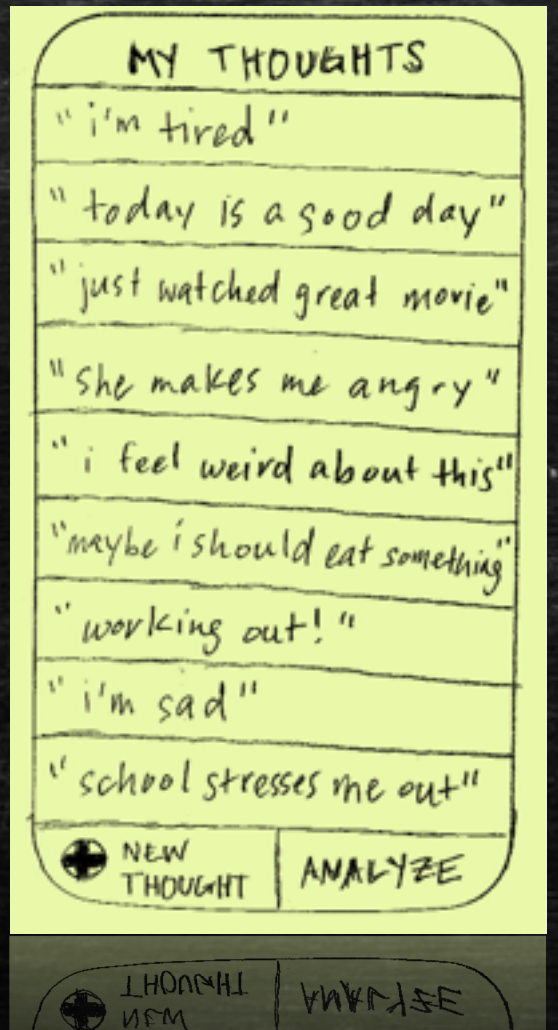
Purpose





Aim: enable users improve self-awareness of emotional state through micro-blogging

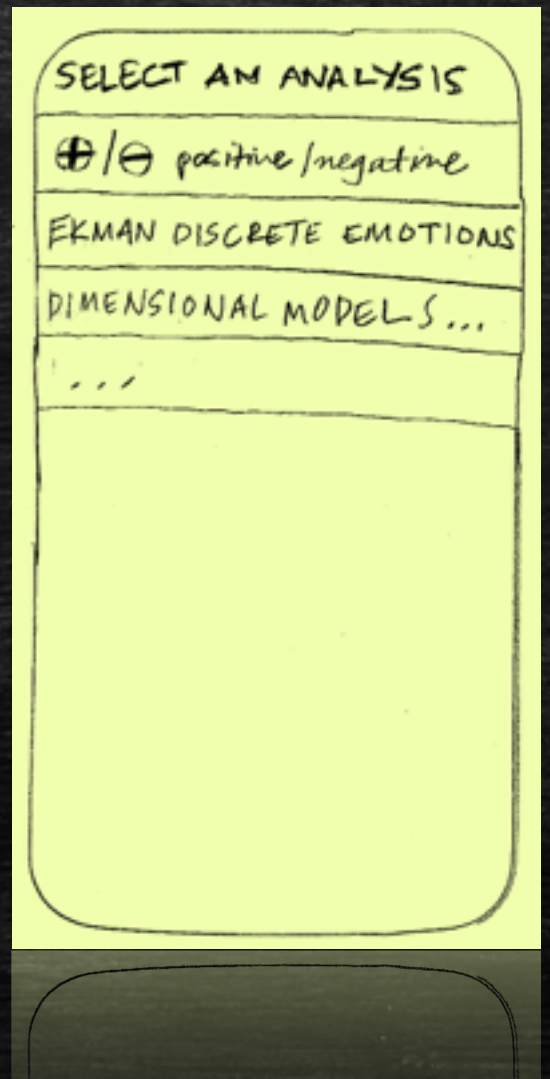
Feed model: 180 character user-input "thoughts"

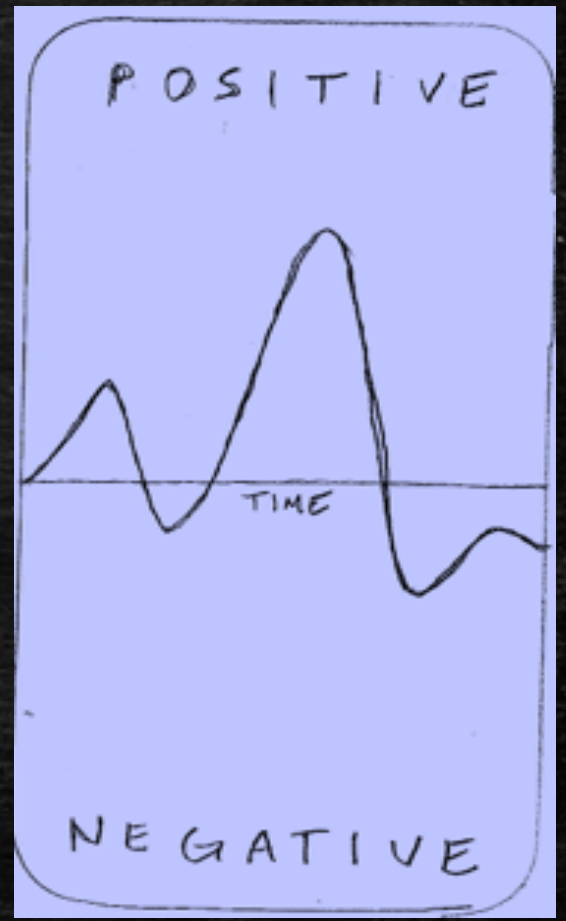
Sentiment analysis: user feeds will be analyzed based on formal psychological models of emotion classification

What is sentiment analysis?

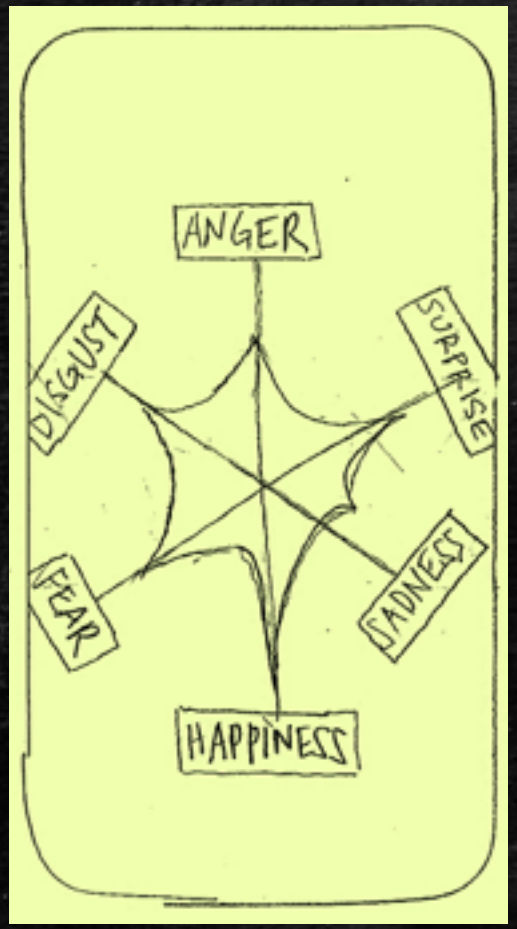
- Sentiment Analysis - A natural language processing method to extract subjective information from text

- Examples:
  - Polarity (positive/negative)
  - Affective/emotional state ("angry", "happy","sad")





Emotion classification



Discrete emotion theory – all humans are thought to have an innate set of basic emotions that are universal and cross-culturally recognizable.

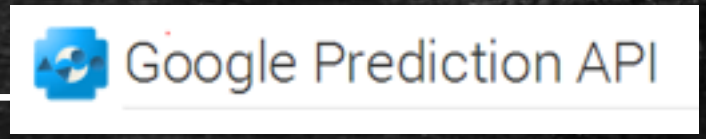
- Paul Ekman and colleagues (1972) concluded the six basic emotions are anger, disgust, fear, happiness, sadness, and surprise.

- Dimensional models of emotion – emotions can be characterized on a dimensional basis in groupings

Natural Language Processing wi

- Entity extraction - identify the proper nouns, i.e. people, companies, locations, etc.
- Sentiment analysis - determine the overall sentiment or towards a specific keyword or entity.
- Keyword extraction - extract the important terms.
- Concept tagging - identify the overall concepts of the text.
- Relation extraction - extract subject-action-object relations.
- Try the AlchemyLanguageAPI!

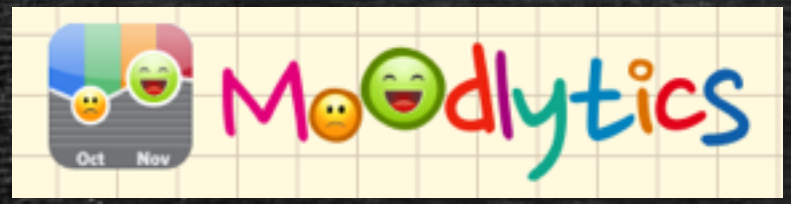
Natural Language Processing wi



- Formal models of emotional classification will require us to create a **custom sentitment analysis model**.
- The Google Prediction API allows us to do this.
- For a given model, we must train the application on labeled data.

Take Away: This application will require a "training period" in which users provide "thoughts" with labels before use by the general population.

Competitors



- A mood logging application that allows users to define their own moods.

- Social application that compares your mood to that of others on MoodPanda.

Existing applications do not perform sentiment analysis on open-ended input. The user either inputs a specific mood or rates their mood on a scale.

Novelty

- Unlike the competition, our application tracks and analyzes sentiment on open ended input.
- The user can choose between different models of emotional classification.

Challenges

- The primary hurdle will be implementing sentiment analysis systems for different emotional classification models.
- Context Awareness – Time, Location, Weather
  - Suggestions?