

Developing and Evaluating a Large Language Model for Emotion Regulation Classification

with Active Learning



Team Project Introduction – Chair of General Management and Information Systems

04.09.2024

Introduction

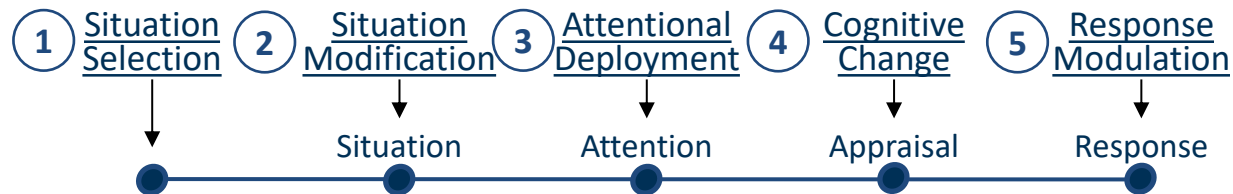
The overall research project

General Research Interest

- Data-driven Behavior Change for Wellbeing
- Mobile Health Applications (mHealth)



- **Digitally Supported Emotion Regulation**

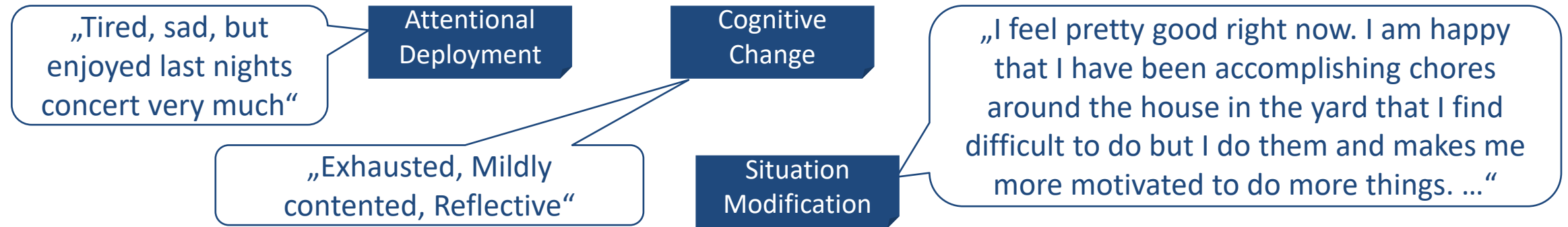


Specific Research Project

- data from a commercially available app that supports its users with grief after bereavement
- 74 different features, among others journaling and reflection features
- over 1.600 active users, who provided over 6.500 journal entries (texts of varying length, mostly short texts)

The Practical Research Problem

Labeling within a very specific context



Task

- Possible labels according to Emotion Regulation Theory
 - Situation Selection
 - Situation Modification
 - Attentional Deployment
 - Cognitive Change
 - Response Modulation
- None or multiple labels are possible

Challenges

- Almost no labeled data available for training, validation and testing
- Very specific context, hence pretrained models may not be easily applicable
- Labeling task is somewhat ambiguous even for trained human labelers and experts
- Comparatively small dataset available

Goals of the Team Project

Labeled Data

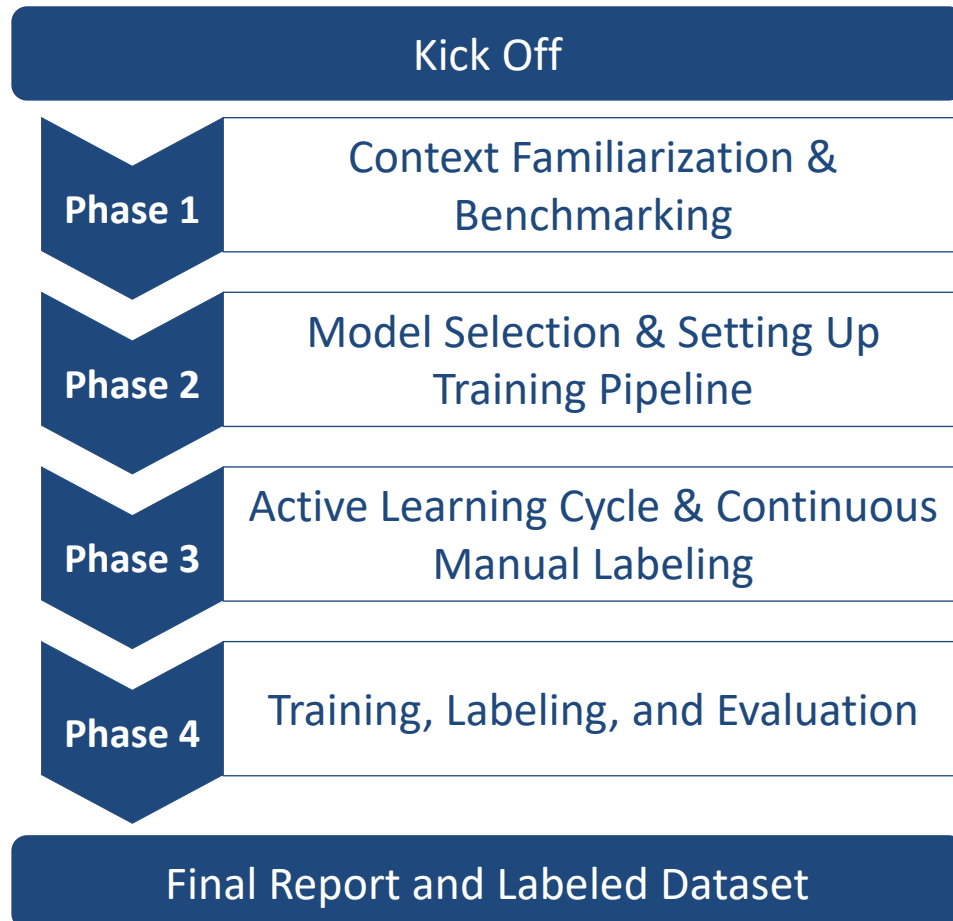
1. Find a suitable approach to label the provided data automatically, for example by applying Active Learning to effectively train a Large Language Model
2. Evaluate your chosen approach by comparing it to other approaches (benchmarking)
3. Assess the reliability and accuracy of the final labels



Outcome: Labeled dataset based on Emotion Regulation Theory and the five categories of Emotion Regulation Strategies

Expectations

Project Phases and Prerequisites



- Extensive programming skills with **Python**
- Skills and knowledge about **Machine Learning** and **Natural Language Processing**
- Experience with **Active Learning** appreciated
- Interest in **psychology** and **emotion regulation**

Questions?

Contact Details



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