

Bachelor Thesis Milestones

Tracking the adoption of microservices in developer communities through sentiment analysis

Practical Tasks

1. Data Collection

- ✓ Identify suitable communities
 - Collect posts from community in automated way
 - Preprocess collected data

2. Data Processing

- Manually classify a subset of the data
- Run existing sentiment analysis tools on our data set
- Compare results with literature
- Improve process (Sentiment classification, Opinion Identification)
- (Train our own model with our data set)
- (Extract features from text)
- (Compare datasets over time)

3. Analysis

- Evaluate and discuss results
- Identify threats to validity
- Improvements and future work

Theoretical Tasks

1. Research Questions

- Formulate 2-3 research questions
- Why is your work relevant?
- What is new about your work?

2. Structure

- how to structure the work?
- There should be a continuous story

3. Related work

- Identify 3-4 main papers on which your approach is based
- Present these and other papers and how your work differs from them.

4. Background

- Basics about microservice architectures
- Sentiment Analysis
- Other topics relevant for your work, e.g. developer communities

5. Approach

- Describe your methodology
- Describe each step of your work

Suggestions for Milestones

Milestone 1:

Basics & Data Collection

Practical Tasks

Milestone 1

1. Data Collection

- ✓ Identify suitable communities
 - Collect posts from community in automated way
 - Preprocess collected data

Theoretical Tasks

1. Research Questions

- Formulate 2-3 research questions
- Why is your work relevant?
- What is new about your work?

2. Related work

- Identify 3-4 main papers on which your approach is based

3. Background

- Sentiment Analysis, Data Preparation, Workflow, Challenges
- Other topics relevant for your work, e.g. developer communities

Milestone 2:

Data Processing

Practical Tasks

Milestone 2

1. Data Processing

- Manually classify a subset of the data
- Run existing sentiment analysis tools on our data set
- Compare results with literature
- Improve process (Sentiment classification, Opinion Identification)
- (Train our own model with our data set)
- (Extract features from text)
- (Compare datasets over time)

Theoretical Tasks

1. Structure

- how to structure the work?
- There should be a continuous story

2. Background

- Sentiment Analysis, Training and improving models, comparing results

Milestone 3:

Analysis and Discussion

Practical Tasks

1. Analysis

- Evaluate and discuss results
- Identify threats to validity
- Improvements and future work

Milestone 3

Theoretical Tasks

1. Approach

- Describe your methodology
- Describe each step of your work

2. Related work

- Present other papers and how your work differs from them.

3. Background

- Sentiment Analysis