



netidee

STIPENDIEN

# Question Answering over Knowledge Graphs

Zwischenbericht | Call 17 | Stipendium ID 6335

Lizenz: CC BY

# Inhalt

1	Einleitung.....	3
2.	Status.....	3
2.1	Meilenstein 1 - <M1> .....	3
2.2	Meilenstein 2 - <M2> .....	3
3.	Zusammenfassung Planaktualisierung.....	4

## 1. Einleitung

This document, as the intermediary report, describes the main activities carried out in the first period of the scholarship in Section 2. The main activities include a manuscript submission (see Section 2.1) and an introduction to the thesis topic (see Section 2.2). Furthermore, a comparison of the real timeline with the planned timeline is reported in Section 3.

## 2. Status

### 2.1 Meilenstein 1 - <M1>

The work on a paper (i.e., a part of PhD project) was continued, and its manuscript was completed and submitted to the intended journal. The main target of the work described in this paper is to enrich an existing smell and taste disorders ontology with further relevant concepts and relationships and construct a knowledge graph based on the defined ontology and patients' data. Then, it showcases an approach to make the knowledge stored in the knowledge graph (e.g., causes, medications, etiology) accessible to users. The paper is already under review and is only listed as one of the related scientific publications completed during the PhD term in the thesis.

### 2.2 Meilenstein 2 - <M2>

The format of this PhD thesis is cumulative, comprising several peer-reviewed papers. The first chapter of the thesis is an introduction to the topic that has been partially completed in this period. The major sections of the introduction chapter are summarized as follows:

- Motivation: The motivation section is currently about 50% completed.
- Challenges and Research Questions: This section contains three major challenges addressed in the thesis and then formulates three research questions. This section has been completed.
- Research Methodology: This section gives an overview of the key steps of the research methodology followed in this thesis (i.e., literature review, design and implementation, and evaluation) and it is about 80% completed.

- Contributions and Discussion: According to the defined research questions, this section summarizes and discusses the core contributions, and it has been completed.
- Preliminaries: This section explains the core concepts and technologies from the semantic web, machine learning, and natural language processing used in this PhD project as well as an overview of question-answering systems. This section has been partially completed and only needs some minor corrections.
- Conclusion and Future Work: This section concludes the thesis, summarizes the answers to the formulated research questions, and gives the three main future directions that need to be tackled by further research. This section has been completed.

This milestone is the core activity of this period and the set objectives have been met. Overall, there are no serious issues with this milestone. The work must be continued on the uncompleted sections and some minor corrections have to be done in the first chapter during the next reporting period.

### 3. Zusammenfassung Planaktualisierung

The work and tasks have been completed according to the plan, and there has been no deviation content-wise from the plan. To stay within the overall timeline, the remaining work on the Motivation section and Research Methodology section will be done. In the next period, the focus is on revising the whole Introduction section based on the feedback and comments coming from the supervisor, adding the other chapters (i.e., four chapters corresponding to the peer-reviewed papers of the PhD project), fixing minor corrections, and submitting the thesis to the university.