



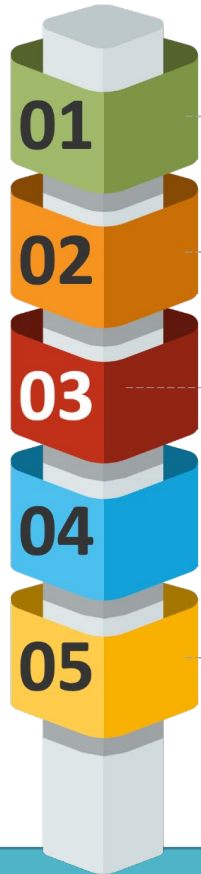
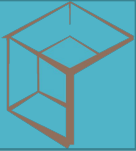
KnowGraphs Workshop

Development and Operations of Knowledge Graph Solutions

30 September 2021

Özge Erten

Research Stages



Definitions



The problem statement, the scope of the project, limitations, and motivating examples have been defined.

Baseline Experiments



To be more competent on the topic a set of experiments will be made with the latest approaches that are selected on the literature review stage.

Experiments



To measure different features of the developed method a set of experiments will be conducted. According to the results, the Development stage and Experiment stage might be repeated to achieve better performance.

Literature Review



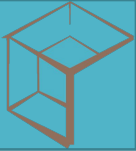
Research has been conducted on two main topics: Knowledge graph change and rewriting SPARQL queries. Some papers were selected to use their methods in baseline methods experiments.

Development



A method will be developed about the solution of the problem statement with the implementation.

Highlighted Questions

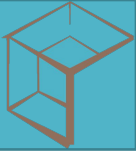


- ✓ Which changes can be observed on different versions of a knowledge graph?
- ✓ How can we observe those changes?
- ✓ In which areas those change information are used?
- ✓ What are the change information usage purposes?



- ✓ Which prior information is required to run a SPARQL query that is not compatible with the new version of a knowledge graph?
- ✓ Is it possible to update all not working SPARQL queries to make them workable for the new version of a knowledge graph?
- ✓ How can we modify SPARQL queries that are not compatible with the new version of a knowledge graph?
- ✓ How can we measure the soundness of updated SPARQL queries?

Scope & Limitations



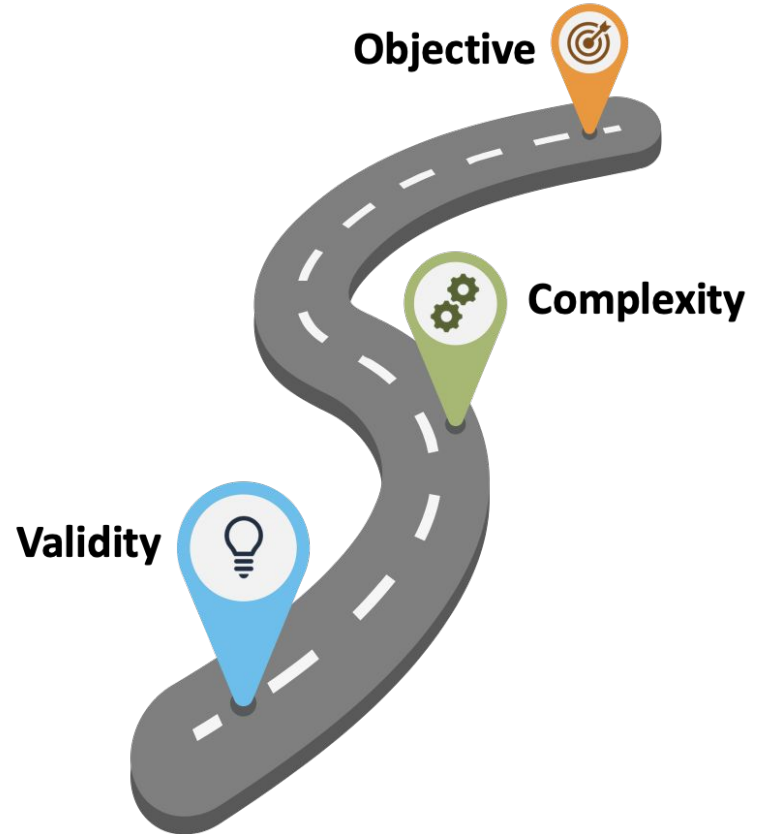
Scope

- ✓ The research objective is to develop a method that modify defined SPARQL queries that are constructed for V1 KG but that aren't working on V2 KG to make them workable on the V2 KG.
- ✓ Version changes are captured through an additional pre-made tool or method.



Limitations

- ✓ RDF knowledge graphs are used in the research
- ✓ Data loss schema changes are not considered
- ✓ Small-scale RDF knowledge graphs



Research Metrics



Research Metrics

Reliability
Validity
Control Group



PhD Indicators

Planning
Research Execution
Teaching
Presenting
Supervision



Thank you!