

Semantic Web Technologies Organization



Hello

- Prof. Dr. Heiko Paulheim
- Assistant Professor
- Research Interests:
 - Semantic Web Knowledge Graphs
 - Data Quality and Data Cleaning on Knowledge Graphs
 - Machine Learning and Data Mining on Semantic Data
- Room: B6 – B1.16
- Consultation: Tuesdays, 9-10 (by appointment)
- Heiko will teach the lectures



Hello

- Sven Hertling
- Researcher
- Research Interests:
 - Semantic Technologies / Semantic Web
 - Linked Data
 - Knowledge Graphs
- Room: B6 – C1.03
- Consultation: by appointment
- Sven will teach the exercises (and some lectures)




Introduction and Course Outline

- Administration
- Introduction
 - Vision of the Semantic Web
 - Building blocks of the Semantic Web
 - Technical foundations

Course Organization

- Lecture
 - Semantic Web standards and languages
 - Programming for the semantic web
 - Creating semantic web data
- Exercise
 - Understand semantic web principles, play with real data
- Project Work
 - teams of 3-4 students build a Semantic Web application
 - teams may choose their own data sets and tasks
(in addition, we will propose some pointers for ideas)
 - write summary about project, present project results
 - **not graded, but mandatory**
- Final exam
 - **final grades are only based on written exam**



Note: this is different from previous years!

Course Organization

- Registration
 - you have registered via Portal2
 - there is a waiting list
 - if you decide not to attend, please write to Ms. Czanderle

Course Contents and Schedule

- Today: Introduction
- 11.09.18: Knowledge Representation with RDF
- 18.09.18: Simple ontologies with RDF Schema
- 25.09.18: Linked Open Data, Programming the Semantic Web
- 02.10.18: SPARQL, Intro to student projects
- 09.10.18: *Work on project proposals*
- 16.10.18: Complex Ontologies with OWL
- 23.10.18: Reasoning with complex ontologies
- 30.10.18: Ontology engineering, top level ontologies
- 06.11.18: Ontology matching and link discovery
- 13.11.18: Rule languages and non-standard Semantic Web languages
- 20.11.17 – 27.11.17: *Project work, no lectures, no exercises*
- 04.12.17: *Final project presentation*

Deadlines

- Submission of project work proposal
 - Sunday, October 14th 23:59
- Submission of final project work report
 - Friday, November 30th, 23:59

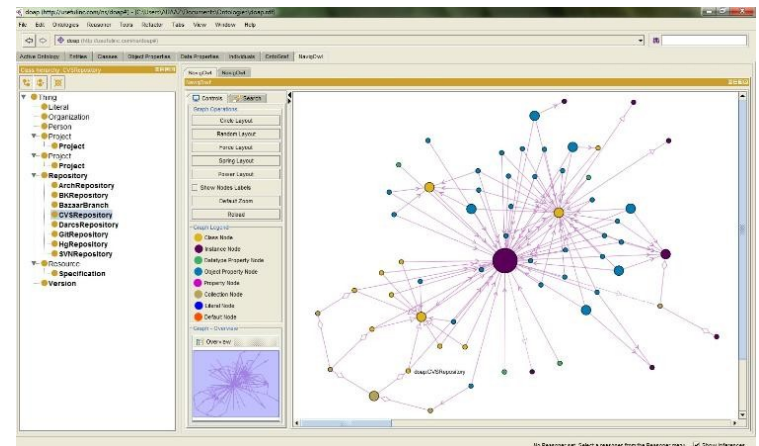


Course Organization

- Lecture Webpage: Slides, Announcements, Web Links
 - hint: look at version tags of slides!
- Additional Material
 - ILIAS eLearning System, <https://ilias.uni-mannheim.de/>
- Time and Location
 - Lecture: Tuesday, 12.00 – 13.30, Room B6 A1.01
 - Exercise: Friday, 12.00 - 13.30, Room B6 A1.04 (starting next week!)

Further Reading and Software

- Follow the links on the website
 - Most material is available online
- Programming environment
 - JENA framework (Java)
 - RDFlib (Python)
- Ontology engineering environment
 - Protégé
 - <http://protege.stanford.edu/>



Warning

- This lecture contains
 - cartoons
 - interactive teaching elements
 - Java and Python code
 - some weird philosophy
- ...have fun! :-)



Questions?

