

Semantic Web Praktikum

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SoSe 2015

DEER

Output Layer

RDF/XML

N3

Turtle

Operators

Split

Merge

Filter

Enrichment Modules

Dereferencing

Linking

NLP

Input Layer

RDF/XML

N3

Turtle

- Integration und Fusion von RDF Datensätzen
- Modularer Aufbau
- Module: $D \rightarrow D$
- Operator: $2^D \rightarrow 2^D$
- <http://aksw.org/Projects/DEER>

Integration von RDF Datensätzen

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- **Erweiterung von GeoLift**
 1. DBpedia Spotlight
 2. Relationsextraction
- **Machine Learning**
 1. Lernen von Konfigurationen aus Trainingsdaten

FOX

- Federated Knowledge Extraction Framework

Home **Demo** Doc

[Go Back](#)

The foundation of the [University of Leipzig](#) in 1409 initiated the city's development into a centre of German law and the publishing industry. The philosopher and mathematician [Gottfried Wilhelm Leibniz](#) was born in [Leipzig](#) in 1646, and attended the university from 1661-1666.

```
[ {
  "@id" : " :t0",
  "http://www.w3.org/2000/10/annotation-ns#body" : [ {
    "@value" : "University of Leipzig"
  } ],
  "http://ns.aksw.org/scms/source" : [ {
    "@id" : "http://ns.aksw.org/scms/tools/fox"
  } ],
  "http://ns.aksw.org/scms/means" : [ {
    "@id" : "http://dbpedia.org/resource/Leipzig_University"
  } ],
  "http://ns.aksw.org/scms/endIndex" : [ {
    "@value" : "43",
    "@type" : "http://www.w3.org/2001/XMLSchema#int"
  } ],
  "http://ns.aksw.org/scms/beginIndex" : [ {
    "@value" : "22",
```

Erweiterung von FOX

Home Demo Doc

Go Back

The foundation of the [University of Leipzig](#) in 1409 initiated the city's developn and mathematician [Gottfried Wilhelm Leibniz](#) was born in [Leipzig](#) in 1646, and

```
[ {
  "@id" : "_:t0",
  "http://www.w3.org/2000/10/annotation-ns#body" : [ {
    "@value" : "University of Leipzig"
  } ],
  "http://ns.aksw.org/scms/source" : [ {
    "@id" : "http://ns.aksw.org/scms/tools/fox"
  } ],
  "http://ns.aksw.org/scms/means" : [ {
    "@id" : "http://dbpedia.org/resource/Leipzig_University"
  } ],
  "http://ns.aksw.org/scms/endIndex" : [ {
    "@value" : "43",
    "@type" : "http://www.w3.org/2001/XMLSchema#int"
  } ],
  "http://ns.aksw.org/scms/beginIndex" : [ {
    "@value" : "22",
```

- Einbindung von 3 Tools für eine gegebene Sprache (insb. Französisch)

LIMES



Source:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Target:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Metric:

Output:

Execution:

Acceptance: Threshold: Relation:

Review: Threshold: Relation:

Detected prefixes:

rdf: (-)

rdfs: (-)

owl: (-)

dc-terms: (-)

dbpedia-o: (-)

dbpedia-p: (-)

- Verknüpfung von Ressourcen
- Deklaratives Framework
- Basiert auf Ähnlichkeitsfunktionen
- Quadratisches Problem
- Skalierbarkeit?

Ähnlichkeitsberechnungen



Source:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Target:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Metric:

Output:

Execution:

Acceptance: Threshold: Relation:

Review: Threshold: Relation:

Detected prefixes:

rdf: (-)

rdfs: (-)

owl: (-)

dc-terms: (-)

dbpedia-o: (-)

dbpedia-p: (-)

- Problem
 - Gegeben S, T
 - Finde alle (s,t) mit $\text{sim}(s,t) > x$
- Ziel: Algorithmus für
 - Jaccard
 - Overlap
 - ...

Parallelisierung



Source:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Target:

Endpoint:

Graph:

Var:

Pagesize:

Restriction:

Property:

Metric:

Output:

Execution:

Acceptance: Threshold: Relation:

Review: Threshold: Relation:

Detected prefixes:

rdf: (-)

rdfs: (-)

owl: (-)

dc-terms: (-)

dbpedia-o: (-)

dbpedia-p: (-)

- Problem
 - Gegeben S, T
 - Finde alle (s,t) mit $\text{sim}(s,t) > X$
 - Algorithmus für schnelle Ähnlichkeitsberechnung
- Ziel: Parallelisiere Algorithmus für
 - HR3
 - ORCHID
 - PPJoin+
 - ...

Linked Data Browser

- Automatische Erzeugung natürlicher Sprache
- Beschreibung von RDF Ressourcen

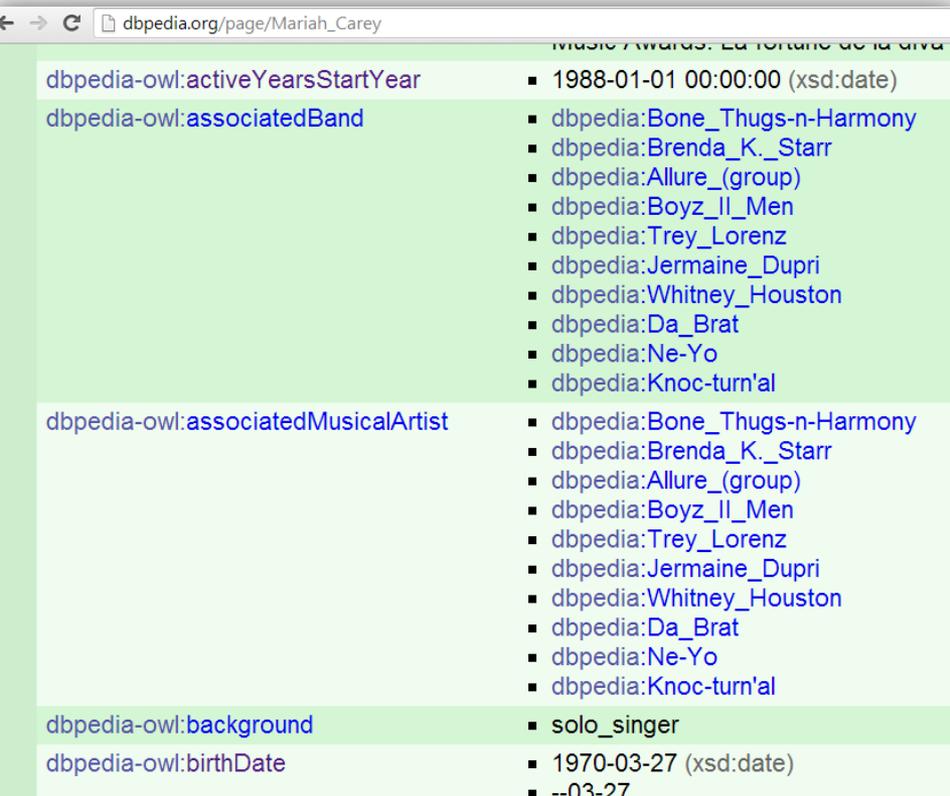


dbpedia-owl:activeYearsStartYear	▪ 1988-01-01 00:00:00 (xsd:date)
dbpedia-owl:associatedBand	▪ dbpedia:Bone_Thugs-n-Harmony ▪ dbpedia:Brenda_K._Starr ▪ dbpedia:Allure_(group) ▪ dbpedia:Boyz_II_Men ▪ dbpedia:Trey_Lorenz ▪ dbpedia:Jermaine_Dupri ▪ dbpedia:Whitney_Houston ▪ dbpedia:Da_Brat ▪ dbpedia:Ne-Yo ▪ dbpedia:Knoc-turn'al
dbpedia-owl:associatedMusicalArtist	▪ dbpedia:Bone_Thugs-n-Harmony ▪ dbpedia:Brenda_K._Starr ▪ dbpedia:Allure_(group) ▪ dbpedia:Boyz_II_Men ▪ dbpedia:Trey_Lorenz ▪ dbpedia:Jermaine_Dupri ▪ dbpedia:Whitney_Houston ▪ dbpedia:Da_Brat ▪ dbpedia:Ne-Yo ▪ dbpedia:Knoc-turn'al
dbpedia-owl:background	▪ solo_singer
dbpedia-owl:birthDate	▪ 1970-03-27 (xsd:date) ▪ --03-27

Mariah Carey is a musical artist. Mariah Carey's genres are, among others, Soul music, Pop music and Hip hop music. Her birth places are New York and Huntington, New York, her birth dates are März 27 and 27. März 1970 and her background is solo singer. Mariah Carey's active years start year is 31. Dezember 1987. Mariah Carey's occupations are, among others, Philanthropy, Record producer and Actor. Mariah Carey's instruments are Singing and Piano.

T6: Linked Data Browser

- Automatische Erzeugung natürlicher Sprache
- Beschreibung von RDF Ressourcen



The screenshot shows a web browser displaying the dbpedia.org page for Mariah Carey. The page content is organized into a table with two columns: property names (prefixed with 'dbpedia-owl:') and their corresponding values. The properties shown include 'activeYearsStartYear', 'associatedBand', 'associatedMusicalArtist', 'background', and 'birthDate'. The values are listed as bulleted items, often with URIs for entities like 'Bone_Thugs-n-Harmony' and 'Brenda_K._Starr'.

dbpedia-owl:activeYearsStartYear	▪ 1988-01-01 00:00:00 (xsd:date)
dbpedia-owl:associatedBand	▪ dbpedia:Bone_Thugs-n-Harmony ▪ dbpedia:Brenda_K._Starr ▪ dbpedia:Allure_(group) ▪ dbpedia:Boyz_II_Men ▪ dbpedia:Trey_Lorenz ▪ dbpedia:Jermaine_Dupri ▪ dbpedia:Whitney_Houston ▪ dbpedia:Da_Brat ▪ dbpedia:Ne-Yo ▪ dbpedia:Knoc-turn'al
dbpedia-owl:associatedMusicalArtist	▪ dbpedia:Bone_Thugs-n-Harmony ▪ dbpedia:Brenda_K._Starr ▪ dbpedia:Allure_(group) ▪ dbpedia:Boyz_II_Men ▪ dbpedia:Trey_Lorenz ▪ dbpedia:Jermaine_Dupri ▪ dbpedia:Whitney_Houston ▪ dbpedia:Da_Brat ▪ dbpedia:Ne-Yo ▪ dbpedia:Knoc-turn'al
dbpedia-owl:background	▪ solo_singer
dbpedia-owl:birthDate	▪ 1970-03-27 (xsd:date) ▪ --03-27

- Problem: Gegeben Ressource R
- Ziel: Generiere HTML Beschreibung von Ressource mit
 - Abstract (aus RDF)
 - Propertyliste
 - Values