



UNIVERSITÄT
LEIPZIG

Presentation

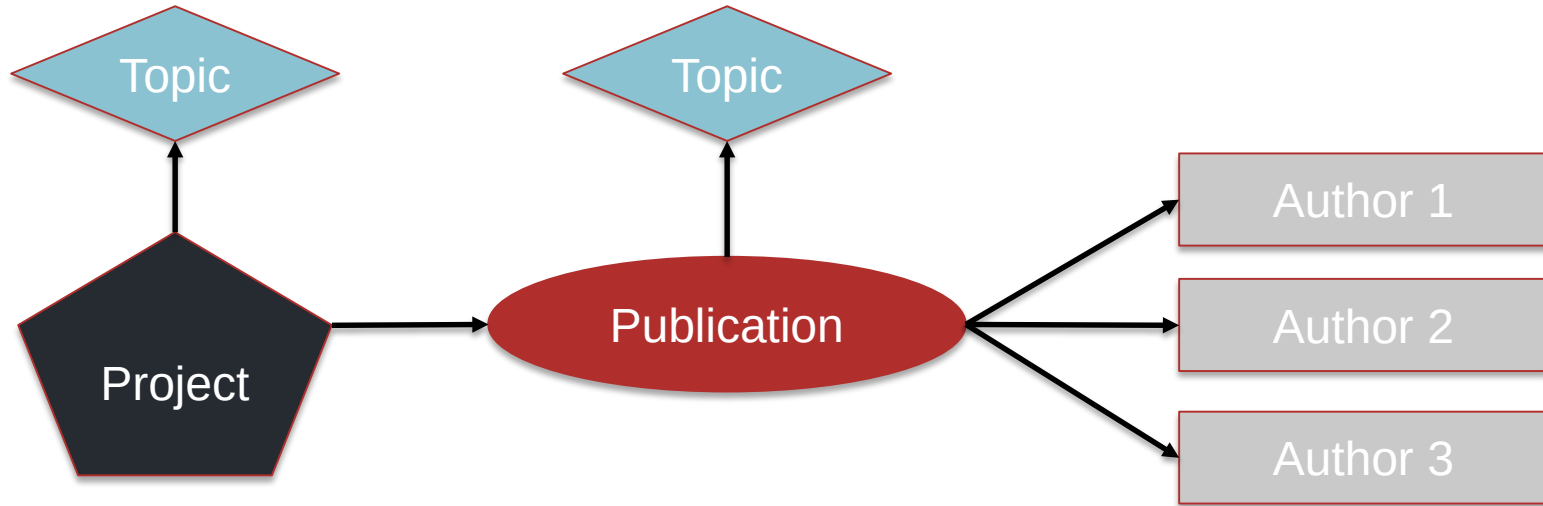
BUILDING A KNOWLEDGE GRAPH WITH AUTOMATICALLY ACQUIRED PUBLICATION CLASSIFICATIONS

Sven Blanck

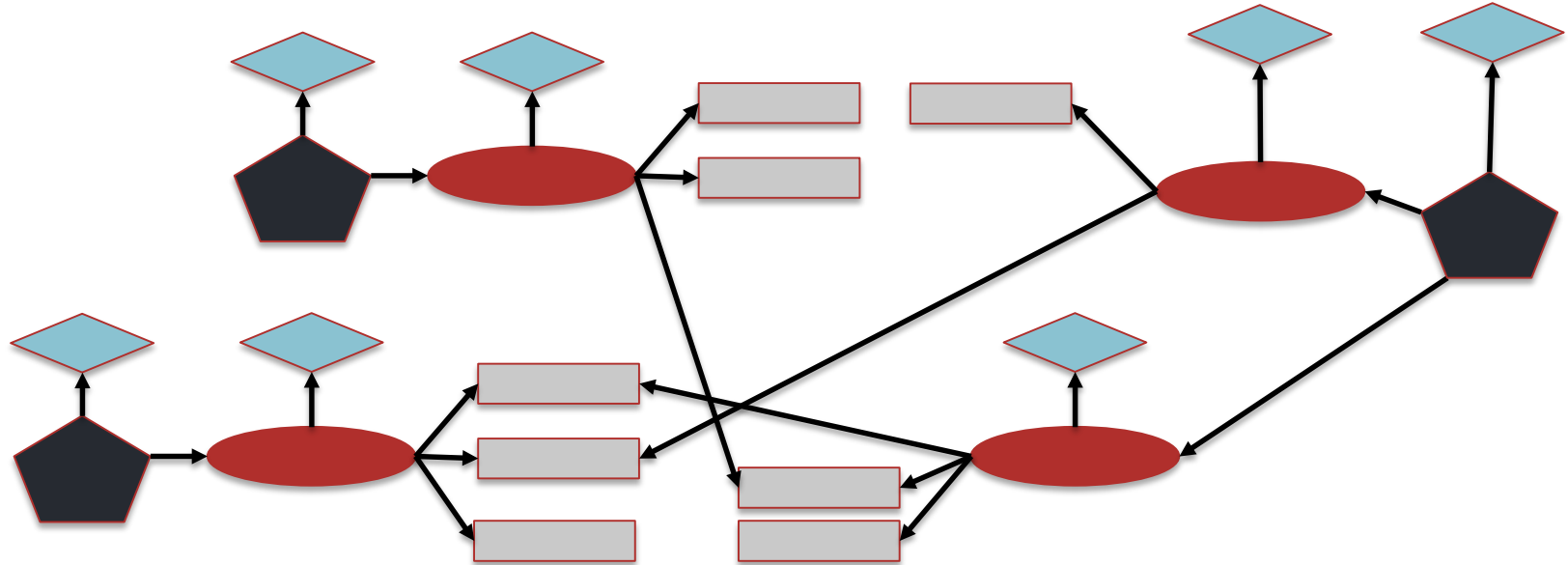
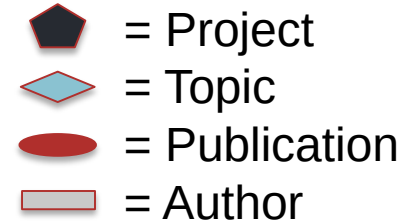
GOAL

- Build a **knowledge graph** consisting of **projects**, **publications**, **topics** and **authors**
- Create **Researcher Profiles**
- **Promote collaboration** by finding researchers with similar research interests
- Provide good structure for **detailed search queries**

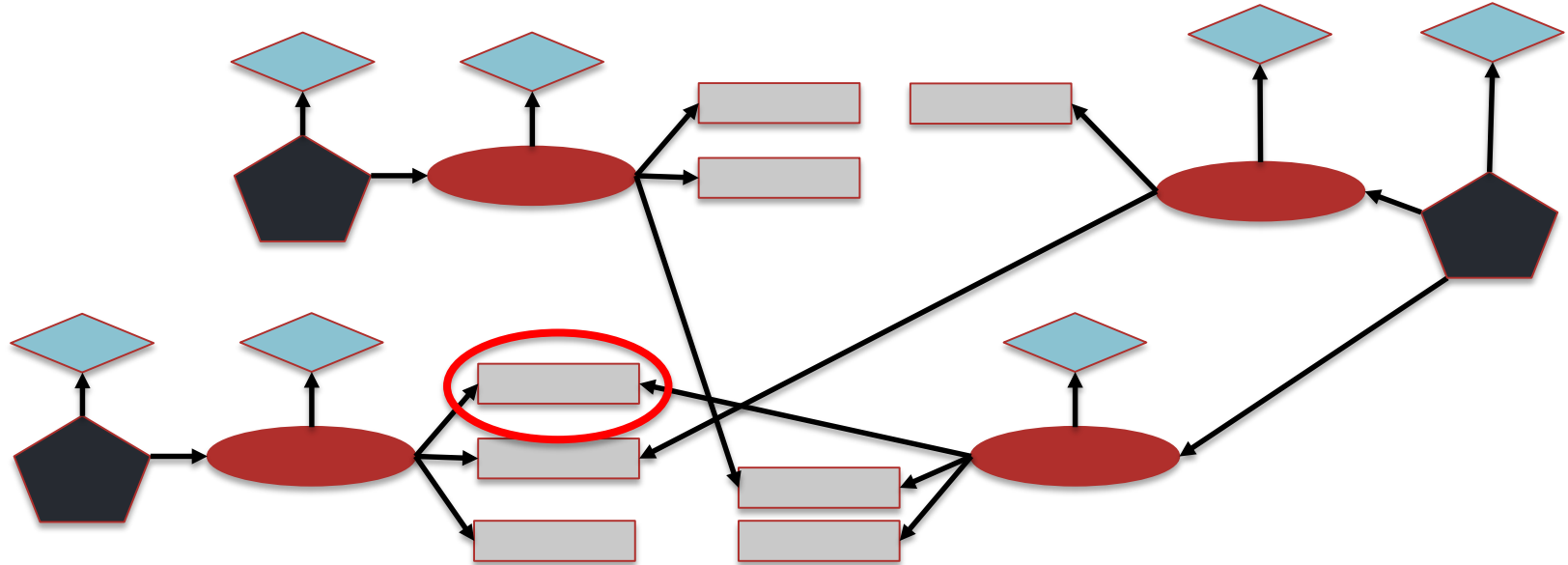
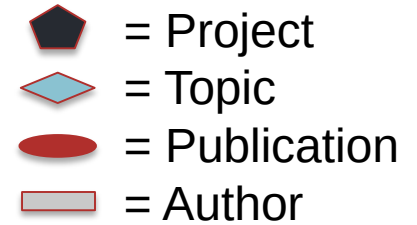
GRAPH CONCEPT



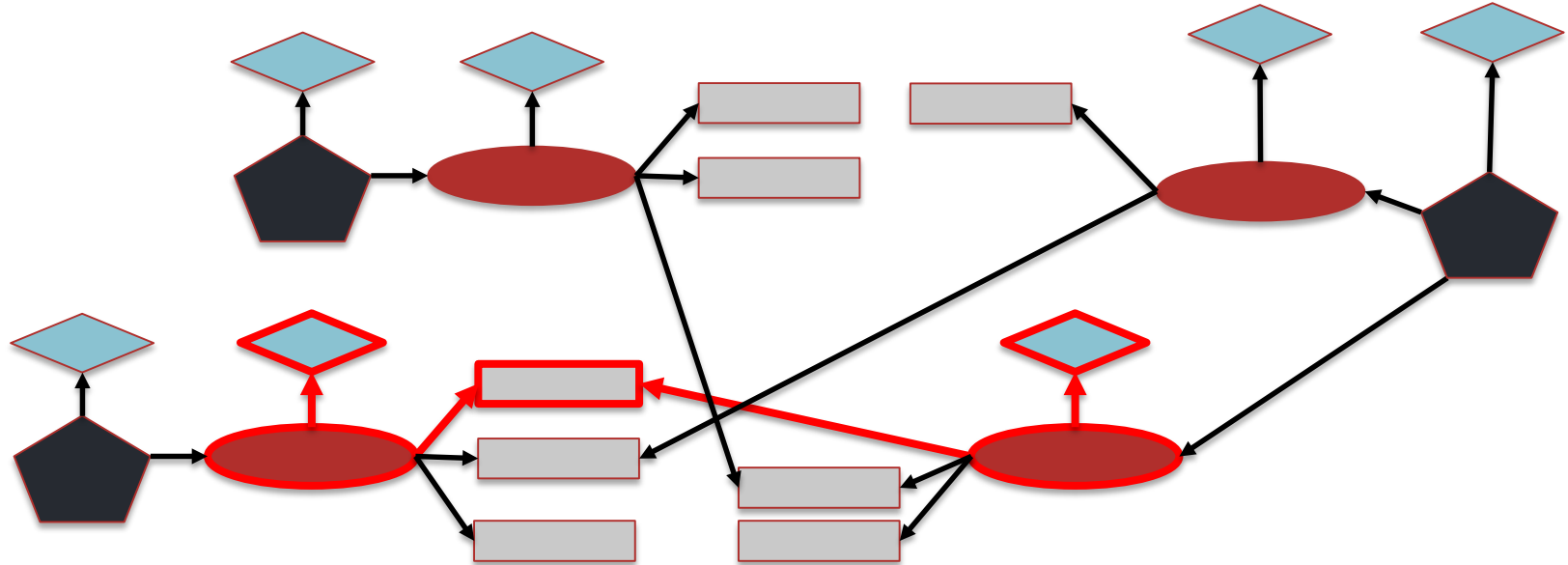
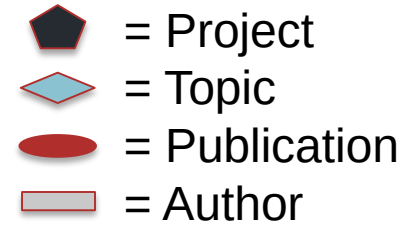
GRAPH CONCEPT



GRAPH CONCEPT – RESEARCHER PROFILE



GRAPH CONCEPT – RESEARCHER PROFILE



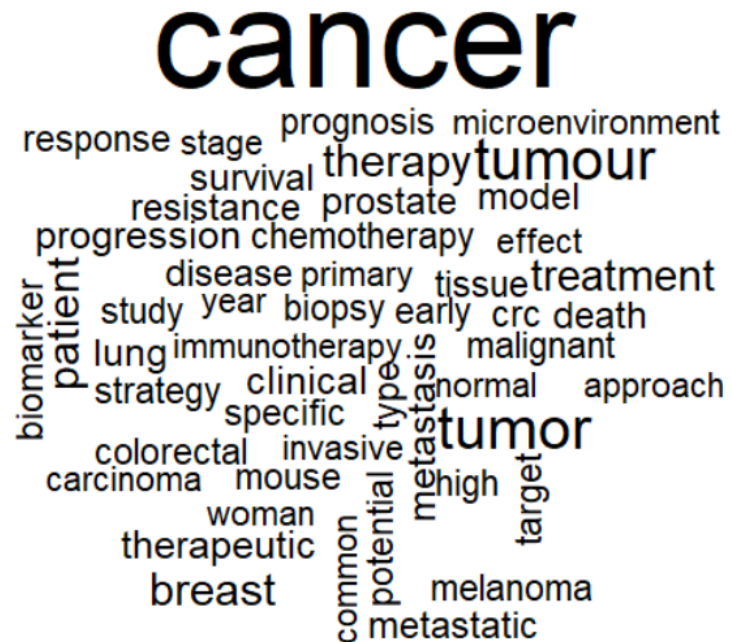
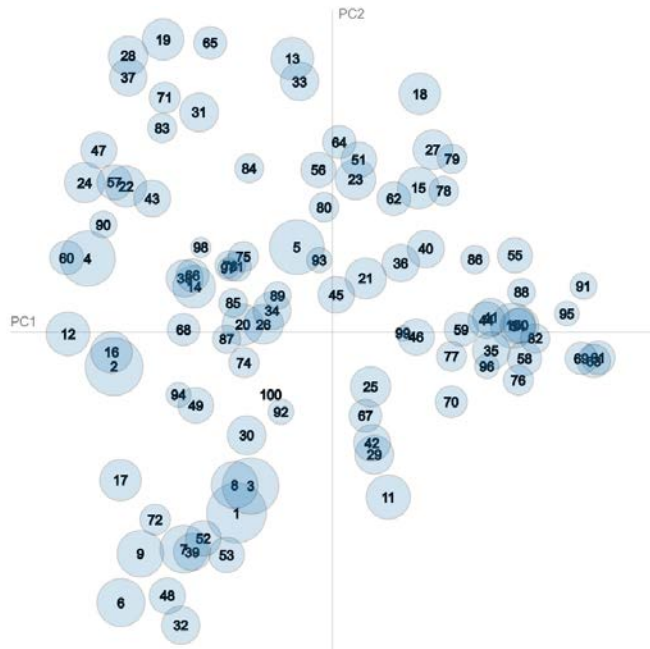
CATEGORY ASSIGNMENT

- Using Text Mining Methods for automatic Text Classification
- Available texts for examination:
 - Project titles, objectives and results
 - Publication titles, abstracts and partly full texts
- Structured Topic Modelling (**STM**) as clustering algorithm
 - Uses text as main input and meta data as covariable
- Lemmatize and filter english texts with Spacy

Artificial	neural	networks	or	connectionist	systems	are	computing	systems	.
ADJ	ADJ	NOUN	CCONJ	VERB	NOUN	VERB	VERB	NOUN	PUNCT
artificial	neural	network	or	connectionist	system	be	compute	system	.

CATEGORY ASSIGNMENT

- Cluster existing texts into 100 topics



CURRENT STATE DEMO

- Using EU funded projects
 - FP5: 1998 - 2002
 - FP6: 2002 - 2006
 - FP7: 2007 - 2013
 - Horizon2020: 2014 - 2020
- Applied STM to the projects
- Comparison of the German U15

LIVE-DEMO

FUTURE WORK

- Add projects funded by the German Research Foundation
- Add publications of Leipzig University
- Connect publications with the corresponding projects
- Expand current Topic model with automatically extracted keywords

KEEP IN TOUCH

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