Modeling the Domain of Software Development to Represent Skills of Programmers **MOTIVATION GOALS** Wikipedia - source of data . gather IT skills of coders . automatically . select an article . compare, search, recommend . create software develop-. known technologies: use Google + ment concept map "software development" . deduce further skills . populate it with technologies . all technologies: process all articles utilize the links . find occurrence of a concept in text . transform verbs into relationships . create concept instance . link it to the map hand crafted initial set is a language is a extract more concepts programming query is written in uses concept language language map uses is written in library platform database is part of is part of framework

get more skills by generating questions "do you also know..."?

instances

search for people

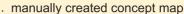
EXPERIMENTS

- . technologies categorization
 - . is a link technology concept
 - . 5 people, 60 technologies, 92 % precision
- . find appropriate Wikipedia article
 - . 40 technologies, 77.5 % precision

is written in

- . automatic learning of new concepts
- . automatic population with instances

CONTRIBUTIONS



link

knows

Java EE

laink

SQL

PostgreSQL

knows

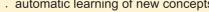
uses

knows

knows

is part of

Spring



usable as a domain model

Michal Holub Mária Bieliková*

holub@fiit.stuba.sk bielik@fiit.stuba.sk

link

Java

knows

uses



SPARQL

deduce skills