ISE 599
Special Topics Applied Predictive Analytics

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Graphs and knowledge graphs: brief introduction
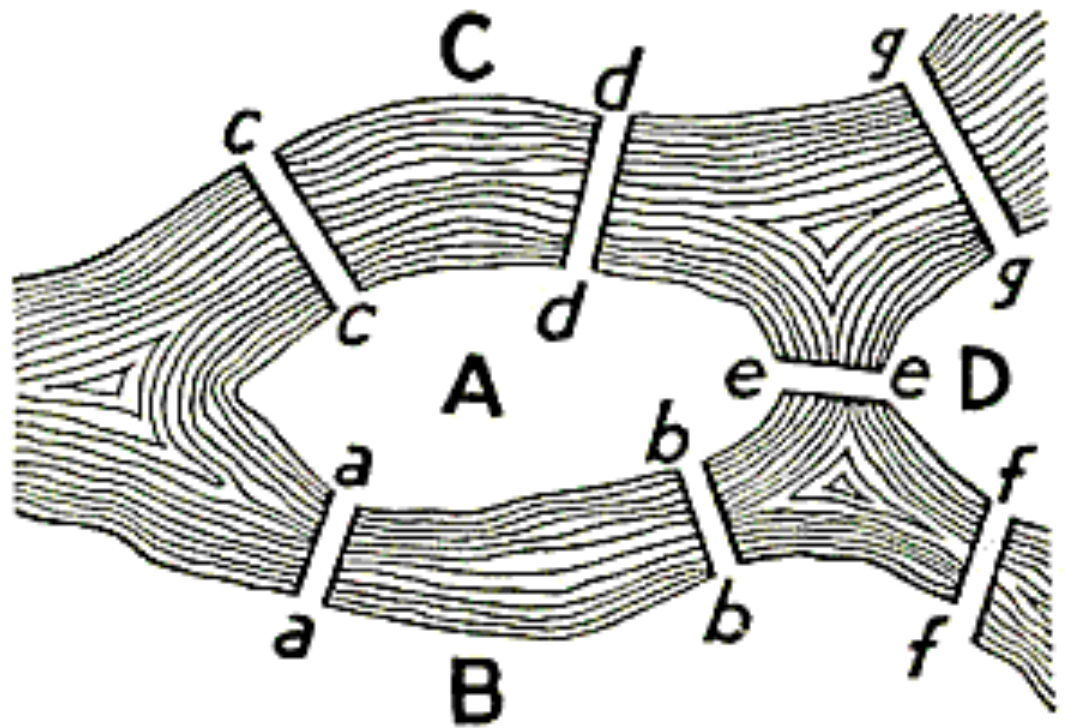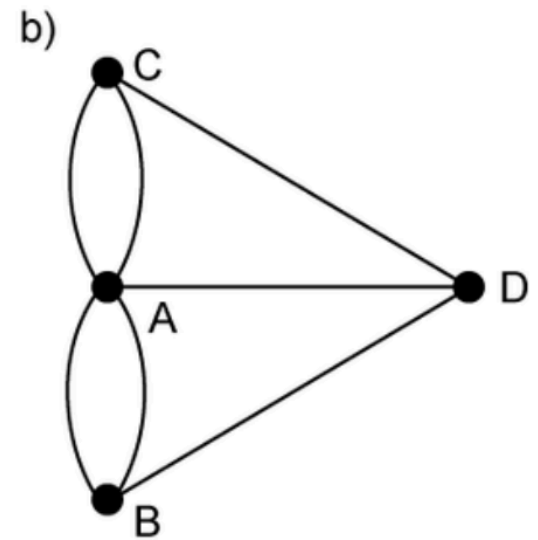
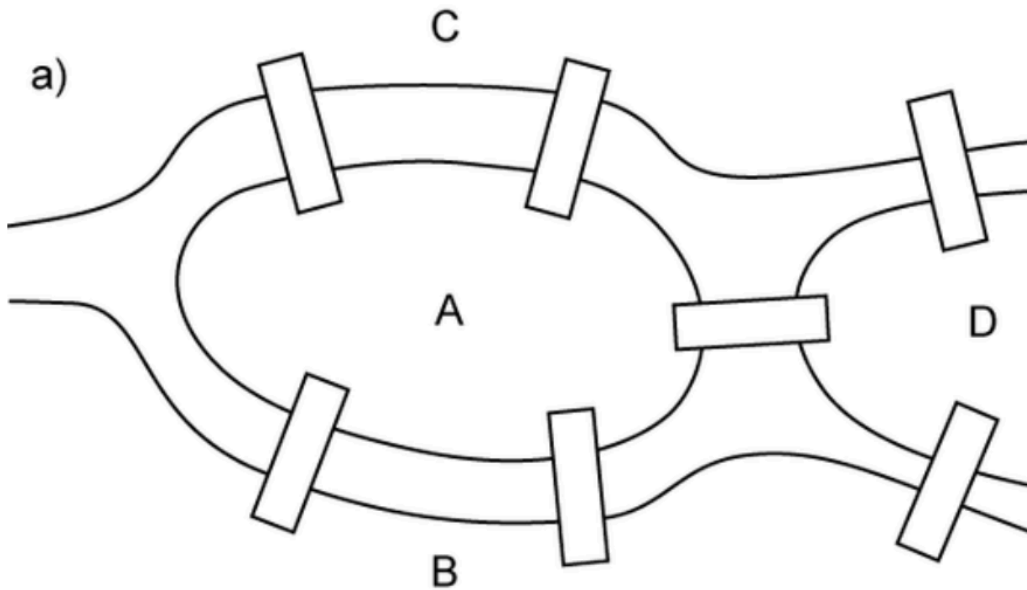# Where does the story begin?

- Koenigsburg!

FIGURE 98. *Geographic Map:*
The Königsberg Bridges.

Bridge problem as graph

Social networks

Twitter API

Lots of ideas to work on if you're interested in social media

- https://www.binghamton.edu/news/story/1983/new-algorithm-can-distinguish-cyberbullies-from-normal-twitter-users-with-90-percer accuracy

The DARPA TWITTER BOT CHALLENGE[1]

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Sentiment Analysis of Twitter Data

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Open Domain Event Extraction from Twitter

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University of Washington
Computer Sci. & Eng.
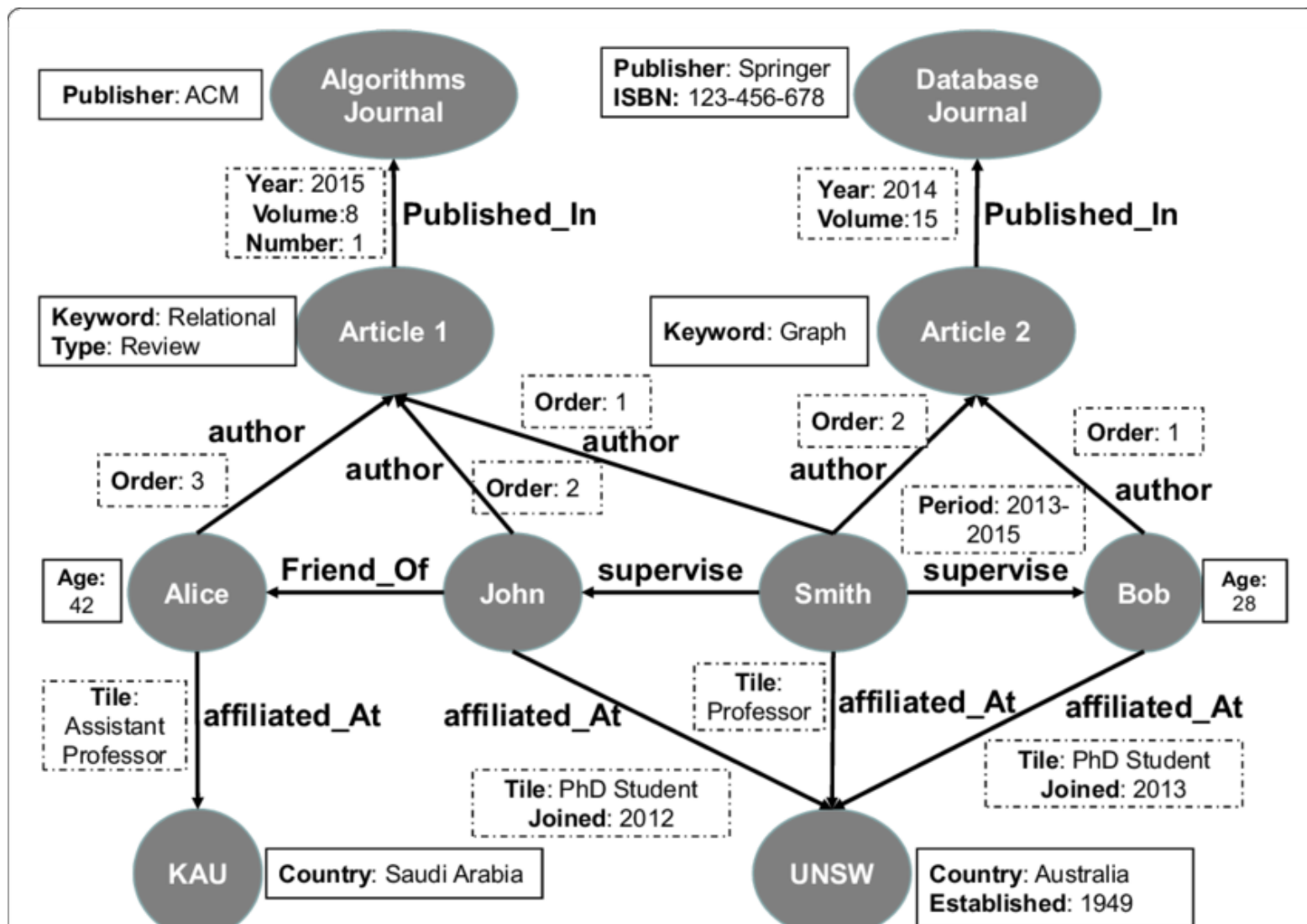Seattle, WA
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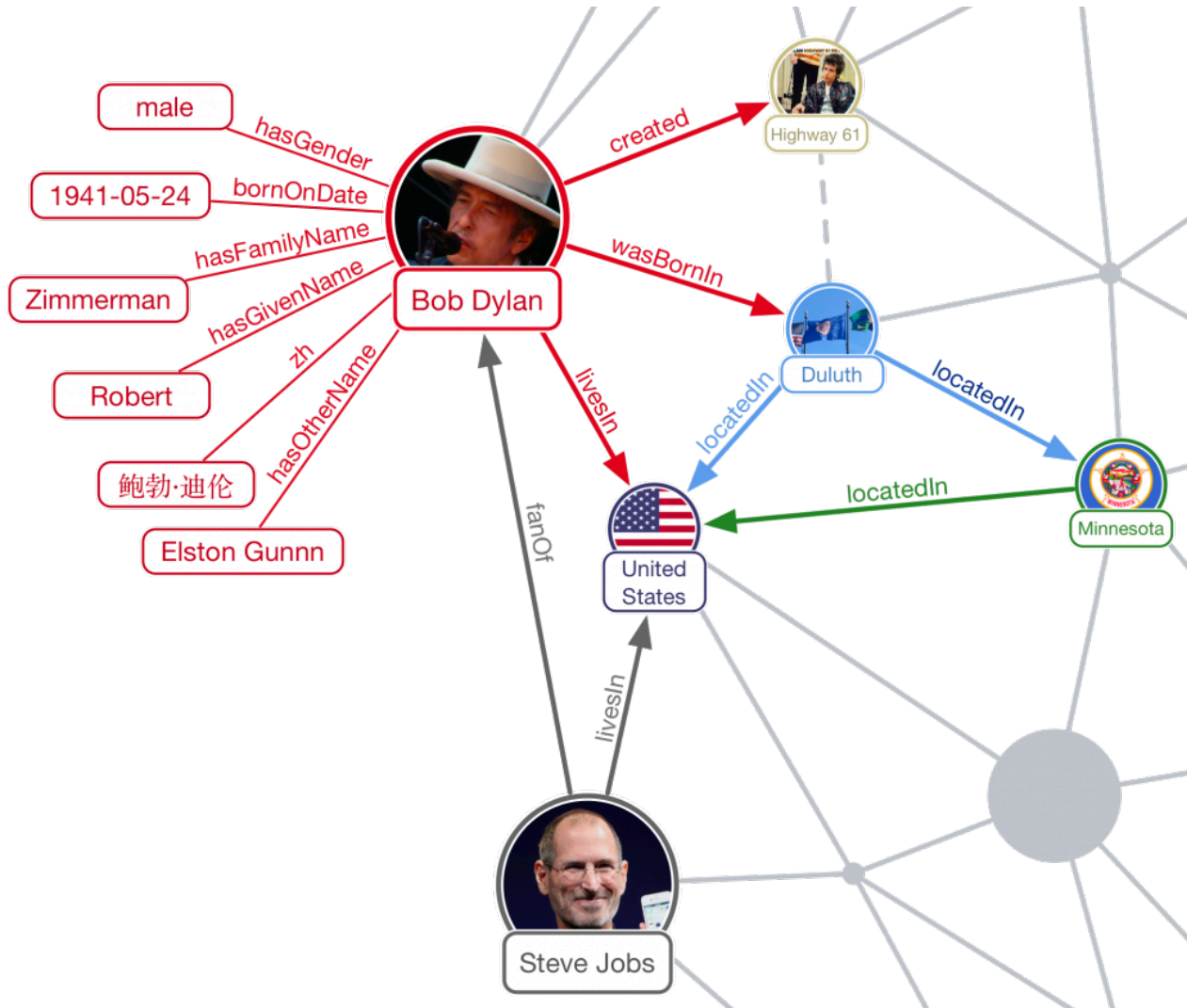Seattle, WA
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Predicting the Political Alignment of Twitter Users

Michael D. Conover, Bruno Gonçalves, Jacob Ratkiewicz, Alessandro Flammini and Filippo Menczer
Center for Complex Networks and Systems Research
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Indiana University, Bloomington

Attributed graphs

Knowledge Graphs

Google Knowledge Graph

https://www.youtube.com/watch?v=mmQl6VGvX-c

From strings to things

Google

places to visit san jose

🔍 All   📍 Maps   🖼 Images   📰 News   🏷 Shopping   ⋮ More   Settings   Tools

About 77,800,000 results (1.02 seconds)
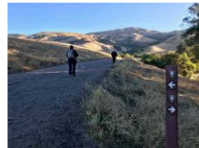
Top things to do in San Jose

Winchester Mystery House
Quirky mansion with odd design details

The Tech Interactive
Interactive displays & an IMAX theater

Mission Peak
Mountain with an iconic summit pole

Happy Hollow Park & Zoo
Animals, activities & conservation focus

☰ More things to do

Things To Do & Places To See in San Jose | Visit San Jose
https://www.sanjose.org/things-to-do ▾
Vibrant, diverse and accessible, **San Jose** shines with 300+ days of sunshine that assures indoor and outdoor activities for every inclination. Whether it's nightlife ...
Attractions and Amusement · Kids and Family · San Jose Wineries · Nightlife

Complete List of San Jose Attractions | Visit San Jose
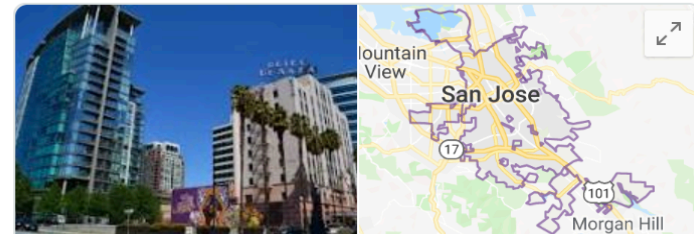https://www.sanjose.org/things-to-do/attractions-and-amusement ▾
Find a complete list of **San Jose attractions** and things to do - perfect for tourists and ... Browse the best **places** to see in **San Jose** and the surrounding Bay Area.

25 Best Things to Do in San Jose (CA) - The Crazy Tourist
https://www.thecrazytourist.com › ... › United States › California (CA) ▾
25 Best Things to Do in **San Jose** (CA): Winchester Mystery House: Flickr. Tech Museum Of

San Jose
City in California

San Jose is a large city surrounded by rolling hills in Silicon Valley, a major technology hub in California's Bay Area. Architectural landmarks, from the 1883 Italianate-style Oddfellows building to Spanish Colonial Revival structures, make up the downtown historic district. The downtown area is also home to the Tech Museum of Innovation, devoted to the exploration of science and technology.

Weather: 64°F (18°C), Wind NW at 10 mph (16 km/h), 85% Humidity

Population: 1.035 million (2017)

Plan a trip

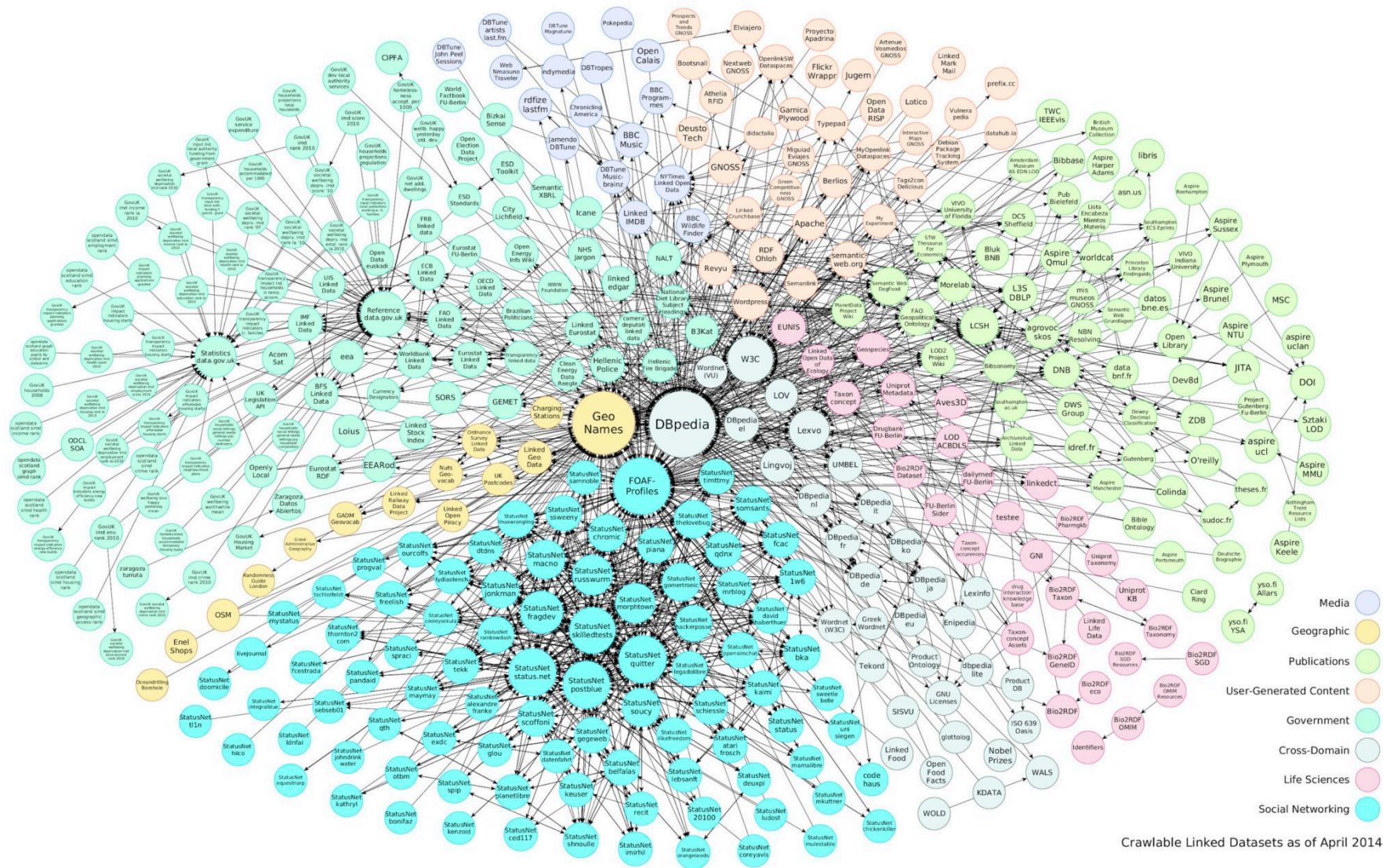🧭   San Jose travel guide

🛏   3-star hotel averaging $206

✈   1 h 5 min flight, from $97

Did you know: San Jose, California has the largest Vietnamese-
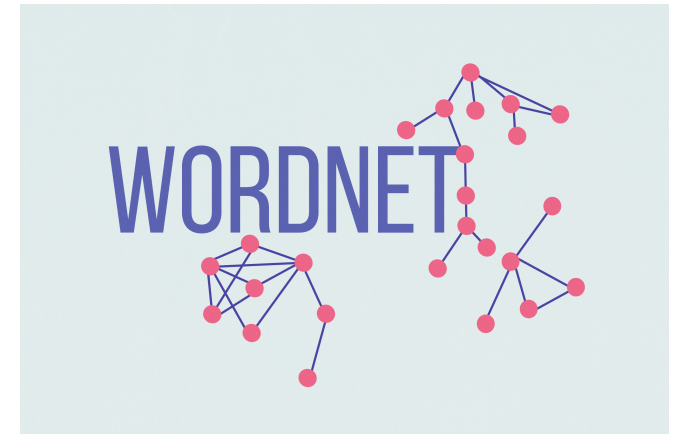
Lots of interest from industry

- KG-focused companies/startups
- 　　　　--Diffbot, Semantic Web Company, OntoText, Capsenta…
- Companies like Thomson Reuters
- Lots of anecdotal evidence that big tech companies are investing internally
- Finance could be the next big ecosystem for KGs (if not already)

Crawlable Linked Datasets as of April 2014

Legend:
- Media
- Geographic
- Publications
- User-Generated Content
- Government
- Cross-Domain
- Life Sciences
- Social Networking

Some resources

Showcase: wikidata, dbpedia, geonames…