



Evaluating knowledge discovery for web search

What is the value of a fact?

Ben Hutchinson

Language Understanding and Knowledge Discovery

Focused Faculty Workshop

November 2013

xi father

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Xi Zhongxun

Xi Jinping, Father



Xi Jinping

General Secretary of the Communist Party of China

Xi Jinping is the current paramount leader of China and the General Secretary of the Communist Party of China. [Wikipedia](#)

Born: June 15, 1953 (age 60), [Beijing, China](#)

Height: 5' 11" (1.80 m)

Office: President of the People's Republic of China since 2013

Spouse: [Peng Liyuan](#) (m. 1987), [Ke Lingling](#)

Parents: [Qi Xin](#), [Xi Zhongxun](#)

Education: [Tsinghua University](#) (1998–2002), [Tsinghua University](#) (1975–1979), [Beijing 101 Middle School](#)

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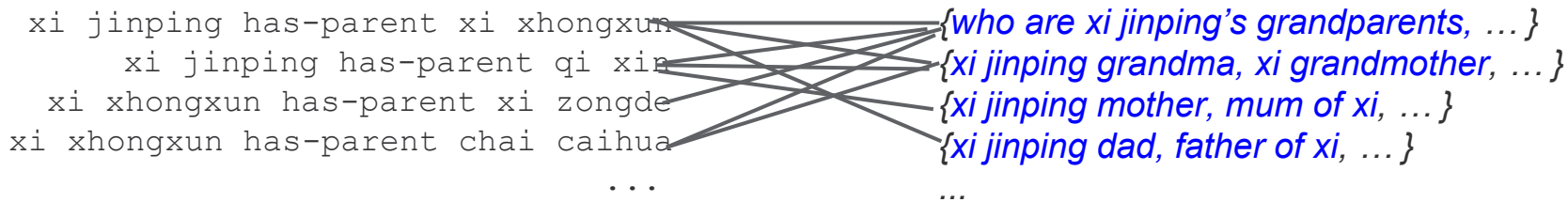
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[Mount Everest](#)
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[Mount Wuyang](#)

Value(fact) := demand in query stream

However...

Many-many relationship between facts and queries



Utility goes beyond demand in query

Harry_Potter type fictional_character

The_Great_Gatsby has_isbn 12345667

Xi_Jinping has-en-wikipedia-key xi_jinping

Costs of bad data

- false positives hurt more than false negatives
- stale data (marriages end, employment tenures finish, “latest”, ...)

Value of coverage is non-linear

mountains in china

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Mountains frequently mentioned on the web



Mount Hua



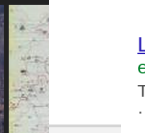
Mount Everest



Mount Emei



Mount Tai



Mount Huangshan

tallest mountains in china

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About 268,000 results (0.48 seconds)

[List of mountains in China - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/List_of_mountains_in_China

The **highest** peak in both Northeast China and the Korean Peninsula. Baiyun Mountain in Guangdong, 7002382000000000000382 metres (1,253 ft).

[List of highest mountains - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/List_of_highest_mountains

There are at least 100 **mountains** with heights of over 7 200 metres (23 622 ft) above

