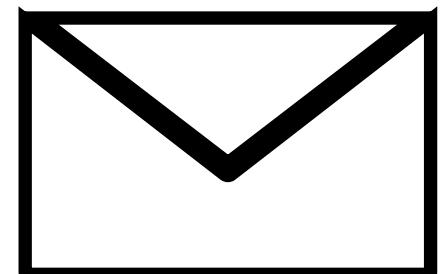


Constructing FashionDB

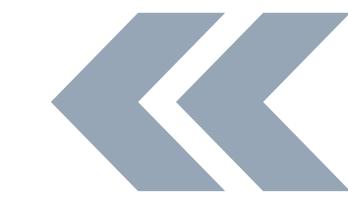


**Not only What, but also When:
Extracting Temporally Informed
Relations From text Biographies**

Teresa Liberatore, Fina Polat



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f.yilmazpolat@uva.nl



FashionDB: WHAT

A Database to collect and store information about (recent) fashion history.

Fashion Designer Biographical information

Fashion houses business information and fashion collections

Main Page Discussion Read Edit Edit source View history More Search WikiFashion

Main Page

FashionDB [edit | edit source]

The FashionDB Wikibase store information about the (recent) history of fashion. Data comes from Wikidata, Wikipedia, Vogue and the Fashion Model Directory. For each piece of information the provenance of the data is made clear through the use of the reference tool.

VOGUE Vogue **WIKIDATA** Wikidata **WIKIPEDIA** Wikipedia **FMD** Fashion Model Directory

WHY FashionDB

The scope of FashionDB is to promote research in the field of fashion history, as the structured format of Wikibase offer users the possibility of query such a database.

Example queries over FashionDB

Where did the fashion designers get their education and when?

```
PREFIX wbt: <https://fashionwiki.wikibase.cloud/prop/direct/>
PREFIX wb: <https://fashionwiki.wikibase.cloud/entity/>
PREFIX pq: <https://fashionwiki.wikibase.cloud/prop/qualifier/>
PREFIX ps: <https://fashionwiki.wikibase.cloud/prop/statement/>
PREFIX p: <https://fashionwiki.wikibase.cloud/prop/>

SELECT ?fashiondesignerLabel ?schoolLabel ?startDate ?endDate WHERE {
  ?fashiondesigner p:P9 ?statement.
  ?statement ps:P9 ?school.

  OPTIONAL {
    ?statement pq:P15 ?startDate.
    ?statement pq:P16 ?endDate.
  }

  SERVICE wikibase:label { bd:serviceParam wikibase:language "en". }
}
```


Alexander McQueen clamshell dress. Spring/Summer 2001.





FashionDB: WHAT

A Database to collect and store information about (recent) fashion history.

Fashion Designer Biographical information

Fashion houses business information and fashion collections

The screenshot shows a search results page for the query "alexander". The search bar at the top contains "alexander" and a magnifying glass icon. Below the search bar, there are two main sections: "Fashion Designer Biographical information" and "Fashion houses business information and fashion collections".

Fashion Designer Biographical information:

Stella McCartney (Q5435)
British fashion designer (born 1971)
Stella Nina McCartney Willis

In more languages
Configure

Language	Label	Description	Also known as
English	Stella McCartney	British fashion designer (born 1971)	Stella Nina McCartney W...
British English	No label defined	No description defined	

Statements

exact match <https://www.wikidata.org/wiki/Q232812> [edit](#)

[+ add reference](#) [+ add value](#)

instance of [human](#) [edit](#)
[1 reference](#)

[fashion designer](#) [edit](#)
[0 references](#)

Fashion houses business information and fashion collections:

- Alexander Wang
American fashion designer
- Alexander Wang
Alexander Wang is a fashion house from ...
- Alexander McQueen
British fashion designer (1969–2010)
- Alexander McQueen
British luxury fashion house
- Alexander Lewis
Alexander Lewis is a fashion house from ...
- Alexander Julian
American fashion designer and business ...
- Alexander Vasilyev
fashion historian and collector
- Alexander Amosu
British/Nigerian luxury designer and entre...
- Alexander Terekhov
Alexander Terekhov is a fashion house fro...
- Alexander Arutyunov
Alexander Arutyunov is a fashion house fr...

FashionDB: WHY

Query Service: fashionwiki.wikibase.cloud Examples More tools ▾

文 English

```
1 PREFIX wbt: <https://fashionwiki.wikibase.cloud/prop/direct/>
2 PREFIX wb: <https://fashionwiki.wikibase.cloud/entity/>
3 PREFIX pq: <https://fashionwiki.wikibase.cloud/prop/qualifier/>
4 PREFIX ps: <https://fashionwiki.wikibase.cloud/prop/statement/>
5 PREFIX p: <https://fashionwiki.wikibase.cloud/prop/>
6
7 SELECT ?fashiondesignerLabel ?employerLabel ?startDate ?endDate WHERE {
8   ?fashiondesigner p:P10 ?statement.
9   ?statement ps:P10 ?employer.
10
11 OPTIONAL {
12   ?statement pq:P15 ?startDate.
13   ?statement pq:P16 ?endDate.
14 }
15
16 SERVICE wikibase:label { bd:serviceParam wikibase:language "en". }
17 }
```

Timeline ▾ ? ↻ 🔍 🔍

744 results in 1205 ms

Code Download Link

1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015

Studio	Founders	Start Date	End Date
Elizabeth Arden	Antonio Caselli	1 January 1945	1 January 1955
Balmain	Karl Lagerfeld	1 January 1955	1 January 1962
Chloé	Karl Lagerfeld	1 January 1963	1 January 1983
Lanvin	Antonio Castillo	1 January 1950	1 January 1962
Givenchy	Alexander McQueen	1 January 1995	1 January 2010
Hermès	Jean-Paul Gaultier	1 January 2004	1 January 2010
Hermès	Martin Margiela	1 January 1997	1 January 2003
Guy Laroche	Marcel Marongiu	1 January 2007	1 January 2015
Hermès	Tomas Maier	1 January 1990	1 January 1999
Bottega Veneta	Tomas Maier	1 January 2001	1 January 2018

FashionDB: WHY

Query Service: fashionwiki.wikibase.cloud

Examples More tools ▾

1 PREFIX wbt: <https://fashionwiki.wikibase.cloud/prop/direct/>
2 PREFIX wb: <https://fashionwiki.wikibase.cloud/entity/>
3 PREFIX pq: <https://fashionwiki.wikibase.cloud/prop/qualifier/>
4 PREFIX ps: <https://fashionwiki.wikibase.cloud/prop/statement/>
5 PREFIX p: <https://fashionwiki.wikibase.cloud/prop/>
6
7 SELECT ?fashiondesignerLabel ?schoolLabel ?startDate ?endDate WHERE {
8 ?fashiondesigner p:P9 ?statement.
9 ?statement ps:P9 ?school.
10
11 OPTIONAL {
12 ?statement pq:P15 ?startDate.
13 ?statement pq:P16 ?endDate.
14 }
15
16 SERVICE wikibase:label { bd:serviceParam wikibase:language "en". }
17 }
18 }

Timeline ▾ ? ↻ 🔍 🔍

1965	1966	1967	1968	1969	1970	1971	1972
Fashion Institute of Technology John Anthony 1 January 1968 1 January 1959				Paul-Valéry-Montpellier Christian Lacroix 1 January 1971 1 January 1969			

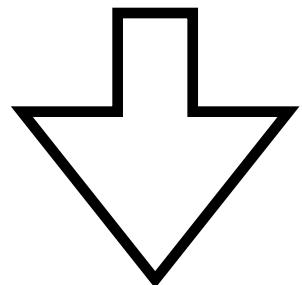
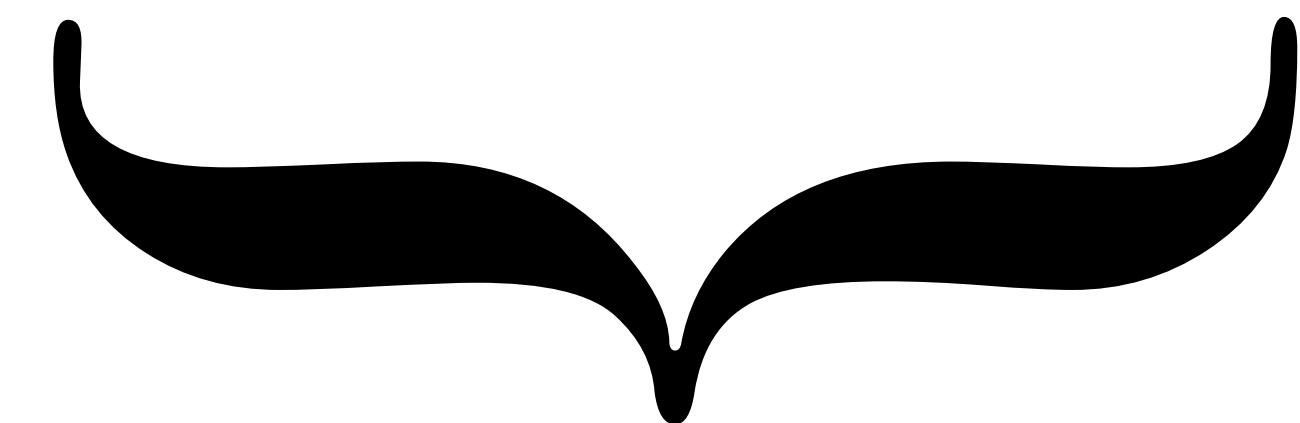
Where does the data come from?



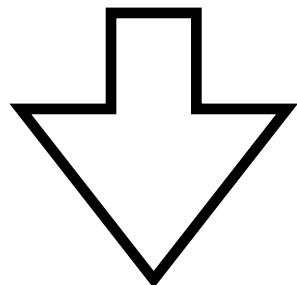
WIKIPEDIA
The Free Encyclopedia

VOGUE

FMD



Structured
BUT
incomplete



“Complete”
BUT
unstructured

Wikidata

occupation	<ul style="list-style-type: none">personal stylistactorfashion designer	<ul style="list-style-type: none">+ 0 references+ add referenceedit+ add referenceedit+ add reference+ add value
educated at	<ul style="list-style-type: none">Central Saint MartinsRavensbourne University LondonBexhill CollegeRye CollegeSouth Houston High School	<ul style="list-style-type: none">When?When?When?When?When?edit+ add referenceedit+ add value
affiliation	<ul style="list-style-type: none">Stella McCartney	<ul style="list-style-type: none">edit+ 1 referenceedit+ add value

Employer?

Work Location?

When?

When?

Structured
BUT
incomplete

Biography from FMD

DESIGNERS > STELLA McCARTNEY > BRANDS

the designers

Stella McCartney was born on September 13, 1971, the daughter of Paul McCartney, member of the Beatles singing group. She is a British fashion designer. Stella has always been fascinated by fashion. As a teenager, she was always mixing up bits and pieces for antique clothing markets with Cerruti or Lacoste, or whatever she could find in her mother's cupboards.

At the age of 13, Stella constructed her first jacket. At 15, she was apprenticing at Christian Lacroix and soon after was awarded a place at St. Martins. She was almost instantly successful, with her graduation collection being sported at the graduation show by supermodels Kate Moss and Naomi Campbell. The show made front-page news, and the entire collecton was sold to Tokio, a London boutique. After graduating from Central St. Martins, London, she did a short, unofficial, apprenticeship with Edward Sexton, a Savile Row tailor.

In 1997 McCartney was appointed chief designer at Paris fashion house Chloe, following in the footsteps of Karl Lagerfeld. She started with the Autumn/Winter 1997 collection, and has been an astounding success. A Chloe boutique has opened in London, though it is hoped that Stella can have more control on the London end than she does on the Paris end. The rather elderly staff at Paris Chloe are pretty rigid about underclothes on the models, and see-through dresses (they are against them). Stella McCartney is a strict vegetarian and PETA supporter like her mother Linda, who died in 2000. She had a contract with Chloe that she need never work with fur or leather. All the shoes are made of vinyl or plastics, all the bags and belts of fabric or raffia. Her soft romantic clothes have been very successful at Chloe. For the Spring 2000 collection, she has created several designs with cut-work rhinestone necklines and bodices.

In the year 2000, Stella McCartney was approached by Tom Ford of Gucci, with an offer of financial support so that she could set up her own label. She agreed to this, and left Chloe. Her assistant at Chloe, Phoebe Philo, took over the designing at Chloe. Stella was looking for an artist to illustrate her new venture. She saw a 1972 sketch made by British artist David Remfry, and after seeing his work, decided that he was the one. In 2002 Remfry prepared the McCartney adverts which appeared in all the leading fashion magazines. The sketches were so eye-catching and sexy that they blew the whole industry away.

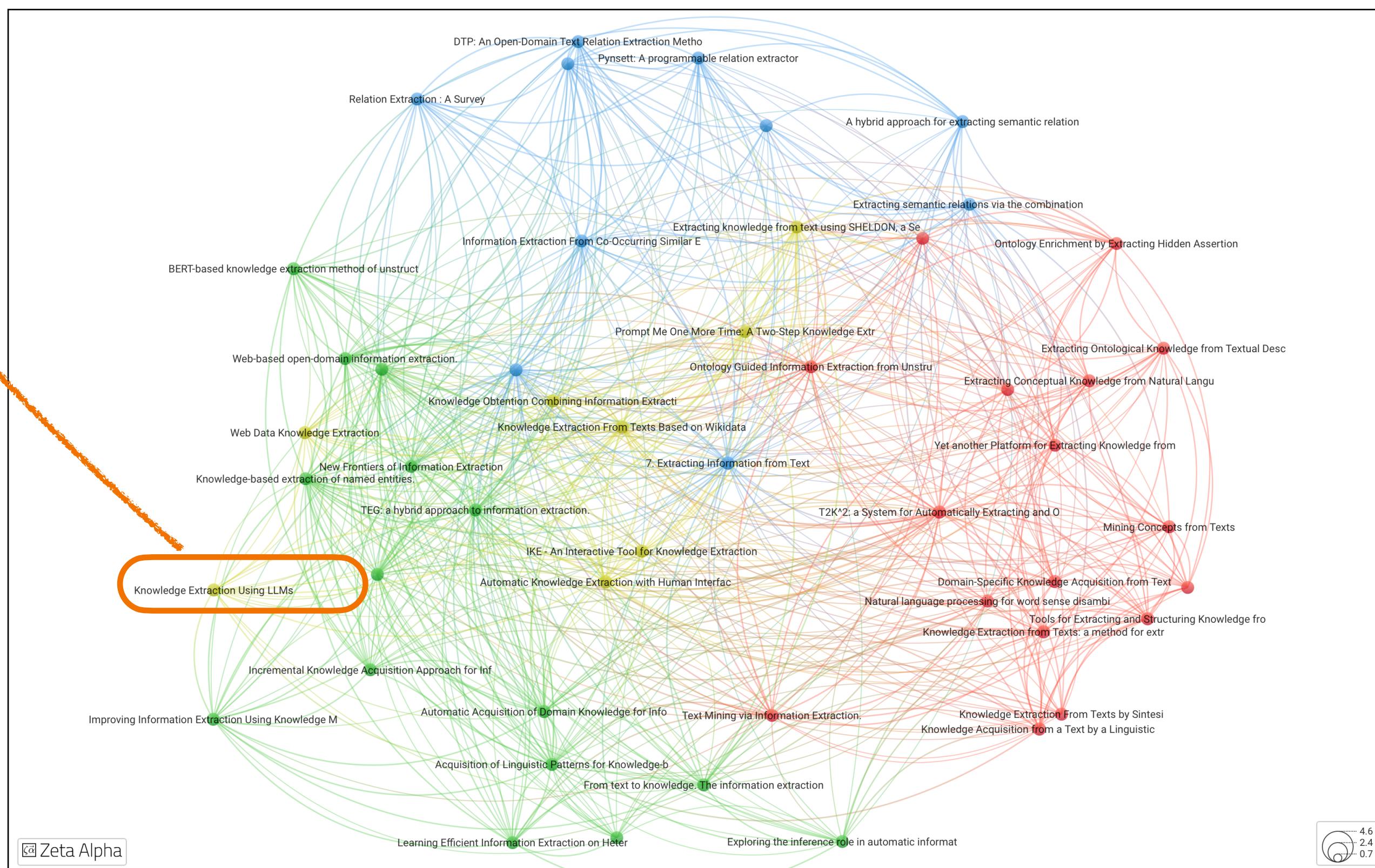
“Complete”
BUT
unstructured



We have many designers...

Manual extraction and annotation = €€€

Knowledge extraction from tex



Knowledge extraction from text using LLM



Text2KG Bench

Given the following ontology, examples and sentences, please extract the triples from the sentence according to the relations in the ontology. In the output, only include the triples in the given output format.

CONTEXT:

Ontology Concepts: human, city, country, film, film genre, film production company, film award, award, written work, film character, film organization

Ontology Relations: cast_member(film,human), director (film,human), screenwriter (film,human), producer(film,human), genre(film,genre), based_on(film,written work), award_received (film,award), production_company(film,film production company), country_of_origin(film,country), publication_date (film,date), characters(film,film character), narrative_location(film,city), filming_location(film,city), main_subject(film,thing), nominated_for(film,award), cost(film,number)

Example Sentence: The Lion King is a animated musical drama film about a lion cub who is to succeed his father and it was directed by Roger Allers and Rob Minkoff (in their feature directorial debuts), produced by Don Hahn.

Example Output: director(Lion King, Roger Allers)
director(Lion King, Rob Minkoff)
producer(Lion King, Don Hahn)

Test Sentence: Birds Anonymous is a 1957 Warner Bros. Merrie Melodies animated short, directed by Friz Freleng and written by Warren Foster.

Test Output:



screenwriter(Birds Anonymous, Warren Foster)
director(Birds Anonymous, Friz Freleng)
publication_date(Birds Anonymous, 1957)
production_company(Birds Anonymous, Warner Bros.)
genre(Birds Anonymous, animated film)

Instruction

Verbalized Ontology

Example(s)

Input Sentence(s)

LLM Output

WikiFashion

System: You extract structured information from biographies about a fashion designer's education, employment, work locations, and awards. Only generate the output in JSON format. Use the example output as a reference for format only.

User: Given the following ontology and sentences, please extract the triples from the sentence according to the relations in the ontology. In the output, only include the triples in the given output format.

Ontology Concepts: academic institution, fashion house, fashion award, city

Ontology Relations: {"educated_at": [[academic institution, **start_date**, **end_date**]], "employer": [[fashion house, title, **start_date**, **end_date**]], "work_location": [[city, **start_date**, **end_date**]], "award_received": [[fashion award, **year**]}}

Synthetic Example Sentence: Evelyn Marlow was born in 1975 in Sunvale, Arborland. Her mother moved from Loria in the early 1970s. Evelyn grew up in the quiet town of Willowford. From a young age, she saved her allowance to buy custom pieces from boutique designers. After two rejections, Evelyn was finally accepted into the prestigious Avondale Institute of Design (AID) in 1995. While studying, she interned with Laurent Jovin, an influential designer known for his unique cuts and materials. She graduated with honors in 1998. In 1999, Evelyn launched her own label, Marlow Atelier, debuting her first collection at the Windora Fashion Week in 2000. Her designs quickly garnered attention, particularly from Sofia Dreyer, a lead buyer for The House of Fleura, one of the top fashion houses in the region. This led to her first big sale when The House of Fleura purchased her entire collection. With her bold, sculptural designs and a fearless use of color, Evelyn's pieces were often accompanied by custom accessories crafted by Silvan Locke. By her fifth season in 2002, she had secured a partnership with Modevera Group, a highly regarded fashion conglomerate. From 2004 to 2006, Evelyn designed for the renowned brand Atelier Amare in Feronna. After spending a few years in Willowford, she moved her operations to the artistic hub of Celestia in 2006. That same year, Evelyn received the Arbor Fashion Laureate for her pioneering work with sustainable fabrics. She collaborated with Atelier Amare for several years before eventually signing a contract with Nouveau & Co. in 2009, where she continued to make waves in the fashion industry. Her 2010 fall collection, known for its modern yet timeless appeal, was highly praised at the Celestia Couture Show. Evelyn remains a leading advocate for sustainable fashion and is celebrated for her avant-garde designs that blend eco-consciousness with luxury.

Example output: {"educated_at": [{"Avondale Institute of Design (AID)", "1995", "1998"}], "employer": [{"Laurent Jovin", "intern", "", "1997"}, {"Marlow Atelier", "founder", "1999", ""}], {"The House of Fleura", "sold collection", "2000", ""}, {"Atelier Amare", "designer", "2004", "2006"}, {"Nouveau & Co.", "designer", "2009", ""}], "work_location": [{"Willowford", "", "2006"}, {"Celestia", "2006", ""}], "award_received": [{"Arbor Fashion Laureate", "2006"}]}

Test sentence:

Test output:

What do we include in the prompt?



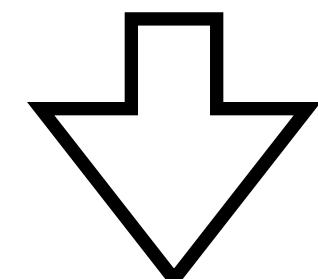
Gemma 2

Example text: *Text*

Example output: *Example KG*

Input text: *Text*

Output:



One shot learning

User prompt: Given the following ontology and sentences, please extract the triples from the sentence according to the relations in the ontology. In the output, only include the triples in the given output format.

Ontology concepts:
academic institution, fashion house, fashion award, city

Ontology: {"**educated_at**": [[academic institution, **start_date**, **end_date**]], "**employer**": [[fashion house, title, **start_date**, **end_date**]], "**work_location**": [[city, **start_date**, **end_date**]], "**award_received**": [[fashion award, **year**]])}

Wikidata

occupation

- personal stylist
- actor
- fashion designer

educated at

- Central Saint Martins
- Ravensbourne University London
- Bexhill College
- Rye College
- South Houston High School

affiliation

- Stella McCartney

Employer?

When?

Work Location?

When?

FashionDB

employer

- Stella McCartney**
- Christian Lacroix
- Chloé**

DESIGNERS - STELLA McCARTNEY BRANDS
the designers

In the year **1997** **Stella McCartney** was approached by Tom Ford of **Chloé**, with an offer of financial support so that she could set up her own label. She agreed to this, and left Chloé. Her assistant at Chloé, Phoebe Philo, took over the designing at Chloé, though it is hoped that Stella can have more control on the London end than she does on the Paris end. The rather elderly staff at Paris Chloé are pretty rigid about underclothes the models, and see-through dresses (they are against them). Stella McCartney is a strict vegetarian and PETA supporter like her mother, who died in 2000. She has worked with Chloé that she need never work with again. All the show mode made of organza, lace and tulle can be seen at Chloé. Her off-the-shoulder clothes have been very successful at Chloé. For the Spring 2000 collection, she has created several designs with cut-work rhinestone necklines and bodices.

In the year **2000** **Stella McCartney** was approached by Tom Ford of **Chloé**, with an offer of financial support so that she could set up her own label. She agreed to this, and left Chloé. Her assistant at Chloé, Phoebe Philo, took over the designing at Chloé, though it is hoped that Stella can have more control on the London end than she does on the Paris end. The rather elderly staff at Paris Chloé are pretty rigid about underclothes the models, and see-through dresses (they are against them). Stella McCartney is a strict vegetarian and PETA supporter like her mother, who died in 2000. She has worked with Chloé that she need never work with again. All the show mode made of organza, lace and tulle can be seen at Chloé. Her off-the-shoulder clothes have been very successful at Chloé. For the Spring 2000 collection, she has created several designs with cut-work rhinestone necklines and bodices.

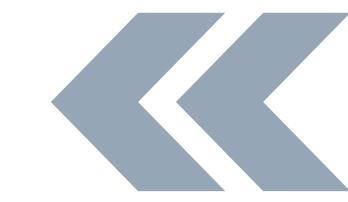


Stella mc

Stella McCartney
retailer of the designer's luxe women's fashions & a...

Stella McCartney
British fashion designer (born 1971)

Search for pages containing
Stella mc



How do we know which entity is which if they have the same label?

Entity Disambiguation

We exploit ontology and class attribution.

Stella McCartney (Q4127)

retailer of the designer's luxe women's fashions & accessories

[edit](#)

[In more languages](#)
[Configure](#)

Language	Label	Description	Also known as
English	Stella McCartney	retailer of the designer's luxe women's fashions & accessories	
British English	No label defined	No description defined	

Statements

instance of	brick and mortar	edit
	▶ 1 reference	
	business	edit
	▶ 1 reference	
	fashion label	edit
	▶ 1 reference	
	fashion house	edit
	▶ 0 references	+ add reference

Stella McCartney (Q5435)

British fashion designer (born 1971)
Stella Nina McCartney Willis

[edit](#)

[In more languages](#)
[Configure](#)

Language	Label	Description	Also known as
English	Stella McCartney	British fashion designer (born 1971)	Stella Nina McCartney Willis
British English	No label defined	No description defined	

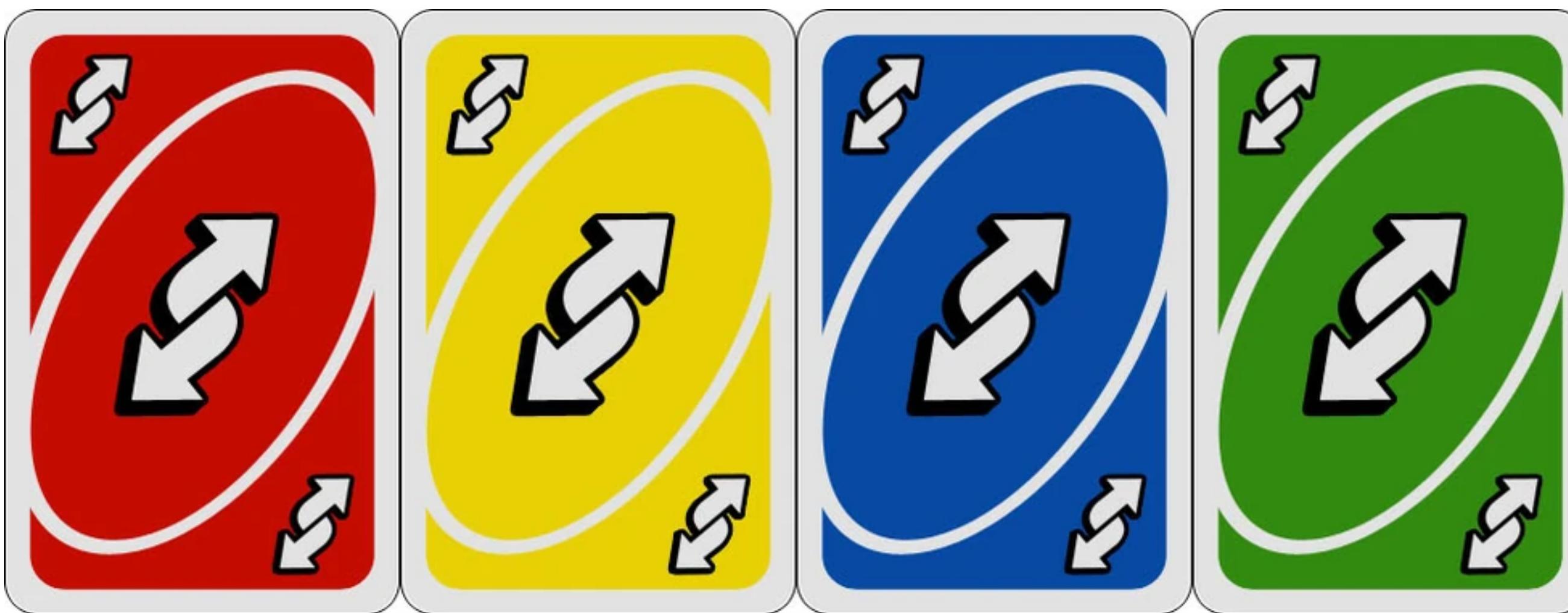
Statements

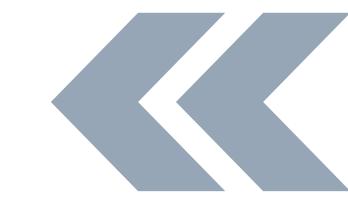
exact match	https://www.wikidata.org/wiki/Q232812	edit
	▼ 0 references	+ add reference
		+ add value
instance of	human	edit
	▶ 1 reference	
	fashion designer	edit
	▶ 0 references	+ add reference
		+ add value

How do we evaluate this?

1. Extract multiple times and then consider as correct the extracted statements consistent across extractions

2.





Present, Past & Future Work



Paper at EKAW
next week at 

CLOIR GitHub repo

Influence beyond similarity:
A Contrastive Learning approach to Object Influence Retrieval

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University of Johannesburg, Johannesburg, South Africa
`{t.liberatore,p.t.groth,m.kackovic,n.m.wijnberg}@uva.nl`

