JaTeDigo - A Natural Language Interface for a Movies Database



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JATEDIGO

What is it?

A Natural Language Interface for a Movies Database

JaTeDigo goals

- Easy to use, fast and credible
- Easy to extend
- Able to answer "traditionally difficult questions", such as:
- Who plays in MOVIE1 and MOVIE2?

DATABASE

Sources

- Internet Movie DataBase (IMDB)
- Oscars Academy website
- Cinema PTGate website

Data

- movies cast
- biographies
- best movie/director
- best (supporting) actor/(supporting) actress

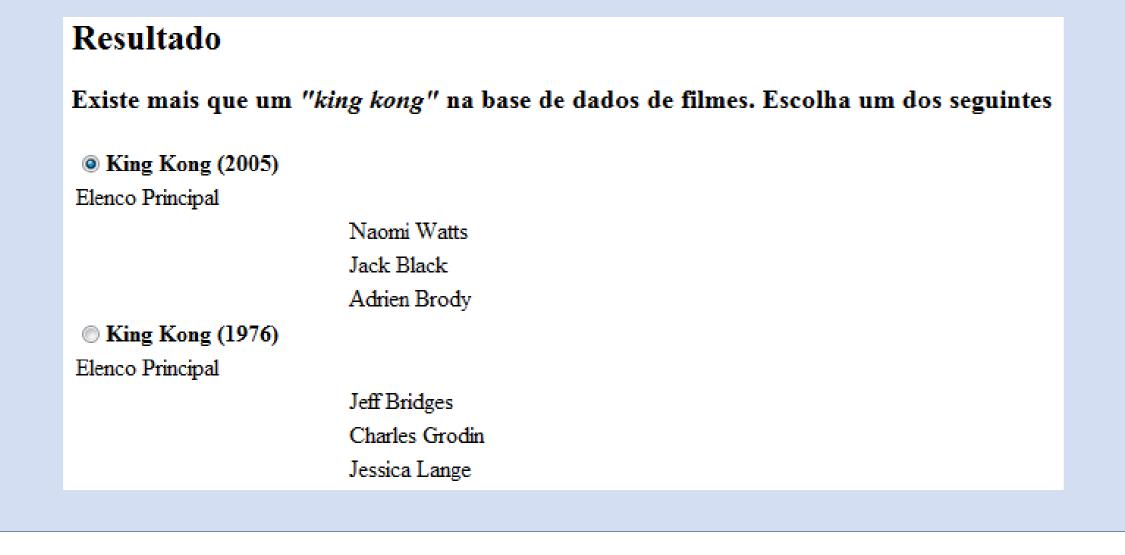
ARCHITECTURE

Named Entity Recognition

- Full-text query
 SELECT DISTINCT films.title
 FROM films
 WHERE match(title)
 AGAINST ("Who directed King Kong?")
- Disambiguation
- ambiguity situations:
 - * people with the same name;
- * movies with the same name;
- * movies with people names;
- disambiguation types:
- * user disambiguation
- * context disambiguation

Local grammar creation

Example of user disambiguation



ARCHITECTURE (CONT.)

Question Interpretation

In which movie did Meg Ryan and Tom Cruise perfomed together?

- Syntactic and semantic pattern matching are used to...
- ... create dependencies (XML)

Example of dependency

target_which_films_main_act_two("meg ryan", "tom cruise")
<DEPENDENCY name="TARGET_WHICH_FILMS_MAIN_ACT_TWO">
<PARAMETER ind="0" num="23" word="meg ryan"/>
<PARAMETER ind="1" num="24" word="tom cruise"/>
</DEPENDENCY>

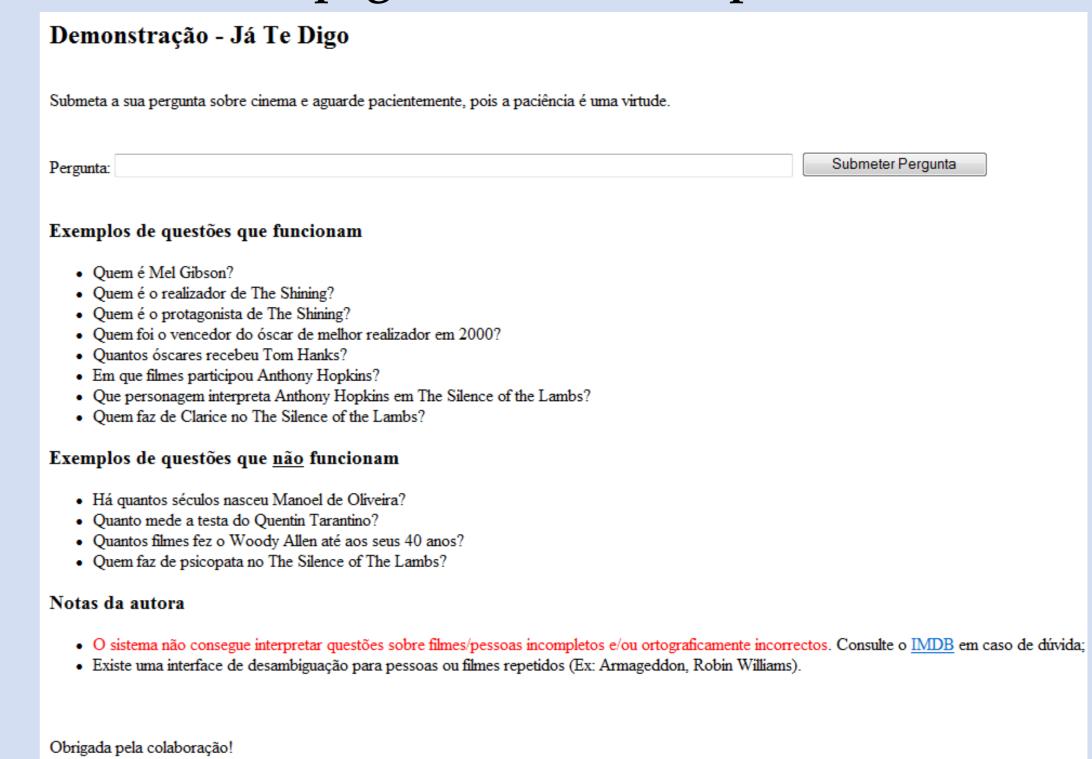
- Dependencies are used to create scripts... script-which-films-main-act-two.pl ACTOR 'meg ryan' ACTOR 'tom cruise'
- ... that generate SQL queries

EVALUATION

Experiments

- First experiment with examples and second experiment without
- 5 users for each experiment/10 questions each user

Web-page for the first experiment



- First experiment results:
- Right answer: 29
- Wrong answer: 4
- No answer: 17 (mainly due to misspelling)
- Second experiment results:
- Right answer: 18Wrong answer: 2
- No answer: 30

REMARKS

- People are influenced by examples
- Urgent: speller integration
- Available at:

http://www.l2f.inesc-id.pt/~arog/index.pl

