



# FrameNet-Based Modeling of the Domains of Tourism and Sports for the Development of a Personal Travel Assistant Application

## RESEARCH AIMS

Show how the modeling was carried out for the Tourism and Sports domains under the m.knob project

Present an automated categorization methodology for tourist attractions based on semantic information extracted from comments posted to online platforms

## M.KNOB APP

- 1 A chatbot providing tourist recommendations
- 2 A semantically enhanced sentence translator
- 3 Dictiopedia: a multilingual repository

It models the Tourism and Sports domains in three languages: Brazilian Portuguese, English and Spanish.

## M.KNOB IN NUMBERS

- 91 Interlingual frames
- 1.671 Lexical Units in Brazilian Portuguese
- 2.551 Lexical Units in English
- 930 Lexical Units in Spanish

## SPORTS MODELING

**Winning\_moves**

**Definition**  
A competitor or team, the **Athlete**, makes a move that awards points.

**Example(s)**

**Core Frame Elements**

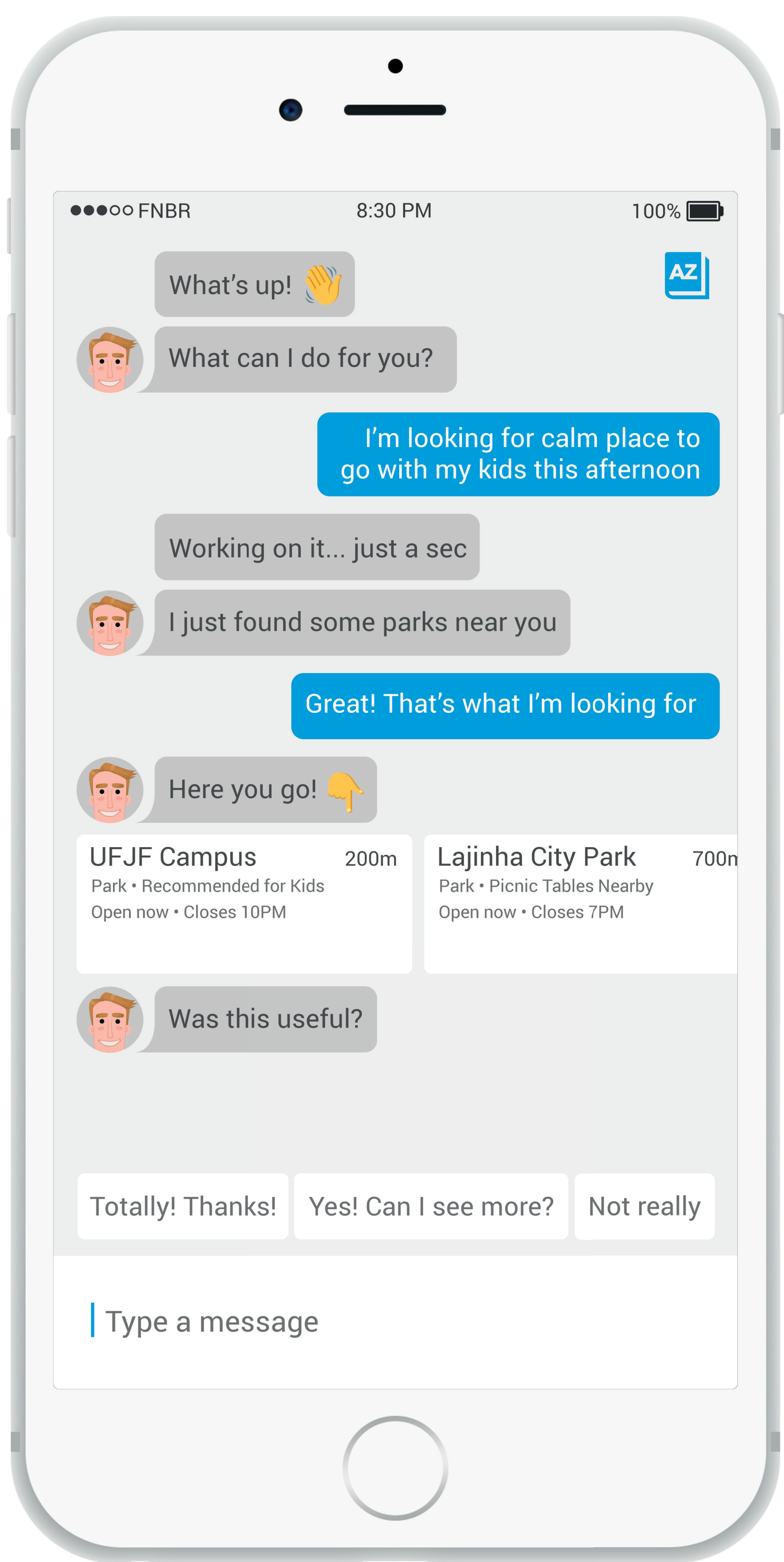
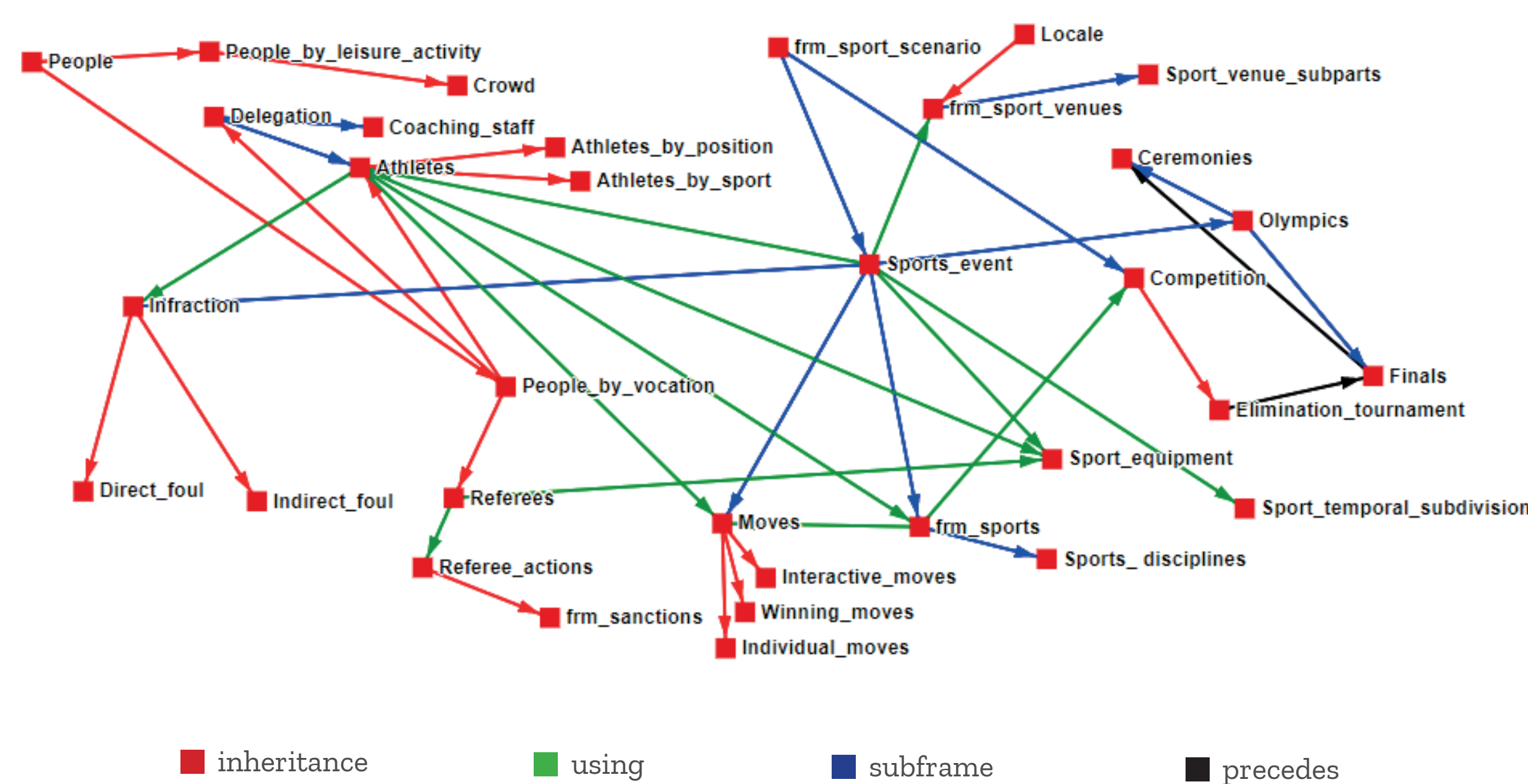
**FE Core:**  
**Athlete** [Athlete] The individual or team who scores the point.  
**Point** [Point] Outcome of the successful move played by the **Athlete**.

**Non-Core Frame Elements**

**Relations**

**Lexical Units**

ace.n assist (hockey).n assist (ice hockey).n backboard.n basket.n



Join our Beta Testing Program

<https://goo.gl/RCBjLF>

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## AUTOMATED CATEGORIZATION OF ATTRACTIONS

1. LU candidates are extracted from user's input and matched to entries in the m.knob lexicon;
2. Lemmas pointing to more than one LU are disambiguated based on the context provided by the user's input;
3. A frame-based semantic cluster representing the user query is generated;
4. The cluster representing the query is matched to those representing places to be recommended by:
  - a. turning the cluster into a graph in which LUs, frames, and other words are nodes and the relations connecting them in the m.knob lexicon are arcs;
  - b. applying spreading activation techniques to this graph to find which of the places in the database is the best fit for the user query.

"I want to go out with my family and be close to nature"

