Neural Semantic Parsing

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Overview

1. Organisation

Grading

- 30% Presentation
- 30% Participation
- 40% Report/Project

Presentation

Presenters work

- Read the paper, understand it, present it
- Either:
  - Prepare 2 questions for your own paper that the others have to answer
  - Prepare the answers to the questions that others send to you
- Direct the discussion at the end

Participants work

- Read the paper, understand it,
- Either:
  - Answer 2 questions for that paper
  - Send some questions to the corresponding papers
- Participate

Topic Distribution

- Please send me 3 paper preferences until the 01.11.2021 so that I can puzzle out who gets which paper
- Its not first come first served, so take your time. If more people want a paper, I start rolling in Python
- I planned with less than 14 people that want ECTS. If we are more, I will select more papers, or if you are feeling adventerous, you can send me paper proposals

Project/Term Paper

- Deadline: 31.03.2022 23:59:59:999
- But: You can already start now
- Project does not have to depend on your chosen paper, same with term paper
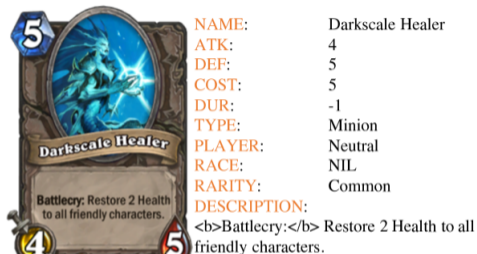- If we have much fewer people participating, I'm also fine with second presentations.

Figure: The general task that has to be solved

Neural Semantic Parsing

- We want to "translate" natural language queries into their corresponding structured query language
- Such languages can be SQL (Text-to-SQL), Overpass QL (Text-to-Overpass), NLMaps (Text-to-MRL), Hearthstone (Text-to-Python)

The Task

NAME:	Darkscale Healer
ATK:	4
DEF:	5
COST:	5
DUR:	-1
TYPE:	Minion
PLAYER:	Neutral
RACE:	NIL
RARITY:	Common
DESCRIPTION:	

\Battlecry:\ Restore 2 Health to all friendly characters.

```
class DarkscaleHealer(MinionCard):
    def __init__ (self) :
        super().__init__("Darkscale Healer", 5,
            CHARACTER_CLASS.ALL, CARD_RARITY.COMMON,
            battlecry = Battlecry(Heal(2),
                CharacterSelector()))

    def create_minion (self, player):
        return Minion(4, 5)
```

Figure: Example from the Hearthstone dataset

Seminar Structure

Papers can be roughly sorted into the following fields:

- Dataset
- State of the Art

The Problem

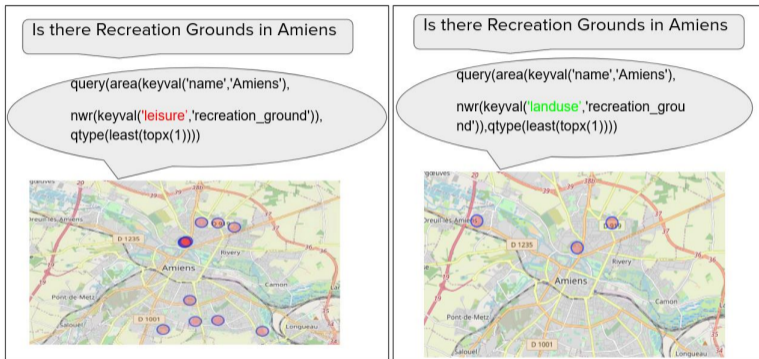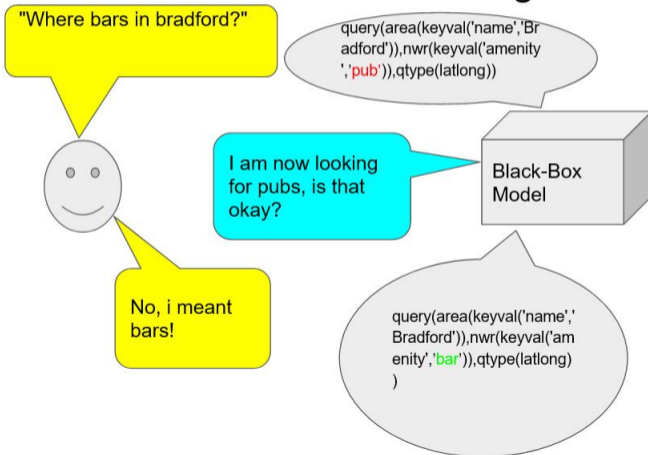Figure: Example from the NLMaps task dataset

The Goal: Interactive Data Annotation to Resolve Ambiguities

The End