# Lab 1 Report

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# Project idea

The project idea is to have a system that interfaces with a reference manager like Zotero. The System has a limitation that it is cannot retrieve data from the paper itself as it is limited to the information shown in the database.

# Dialouge 1 Distilling process

### **D1** Transcription

The scenario is as follows: the user search for a keyword, but the system cannot find the paper. The then, ask the system to list all the papers under a particular folder. As they would expect, there is an item with the wrong title, and they fix it.

- **U.** Hello / search for a keyword /pause/ human annotated dataset
- **S.** Hello / searching / cannot find your request
- **U.** Strange / what items do you have under r /pause/ datasets folder
- S. I have conference paper wizard of Wikipedia /pause/ knowledge
- **S.** powered conversational agents / journal article introducing man
- S. tls a novel multi domain information seeking dialogues dataset /
- **S.** a journal article dia two / a web page
- **U.** just one moment
- S. /pause/ yes
- **U.** let me check /pause/ ok so the dia 2 item / can you change the
- U. title to human annotated dialogues dataset for natural

- **U.** conversational agents
- S. Ok dia two title changed to human annotated dialogues dataset for
- S. natural conversational agents / do you want to change anything else
- **U.** Yes [change theee] / what is the document type again
- S. journal article
- **U.** ok ok [so] aah keep it /m [so can you tell] [how how] so do you
- **U.** have authors how many authers do you have
- S. I have /pause/ four authors
- U. okey /pause/ good thank you

#### D1 Distilled

Below each USER-SYSTEM turns, I will provide a short description about what change. Also, generally speaking, if the system turn has a hesitation or it is syntactically uncorrect it will be fixed.

- **U.** Hello / search for a keyword /pause/ human annotated dataset
- S. Hello / let me check / Sorry I cannot find a paper that have a keyword
- **S.** human annotated dataset

TURN-KEEPING: Let me check\* and CONFIRMATION: Repeat the keyword

- **U.** Strange / what items do you have under r /pause/ datasets folder
- **S.** Under the dataset I have /pause/ wizard of Wikipedia knowledge
- **S.** powered conversational agents /pause/ introducing man tls a novel
- **S.** domain information seeking dialogues dataset /pause/ dia two
- **S.** /pause/ IREM\_TITLE \

Not sure how the system will behave when listing several papers. But I think it should go by titles only one by one with some pause between. No need to state the document type. Because the system will not state the document type the utterance *a web page* is replace by *IREM\_TITLE*. It is assumed that the system will continue listing the items under the required folder.

- **U.** just one moment
- **S.** yes

Nothing changed. It is compatible with TURN-TAKING(1).

- **U.** let me check /pause/
- S. Ok

- **U.** ok so the dia 2 item / can you change the title to human annotated
- U. dialogues dataset for natural conversational agents
- **S.** Ok dia two title is changed to human annotated dialogues dataset
- **S.** for natural conversational agents / do you want to change anything else

I added a feedback from the system when the user took a time to check the paper. TURN-TAKING(3) I added *do you want to change anything else* which may contradict with QUANTITY(2) but I think it is needed to finish the conversation instead of waiting for the user's next question.

- **U.** Yes [change theee] what is the document type
- S. journal article

I removed the last word "again" from the user utterances. It was said because the system brought it up in the prevouis conversation. Currently it does not make sense.

- **U.** ok ok [so aah] keep it / [so can you tell] [how how so] do you have
- **U.** authors how many authers do you have
- **S.** I have four authors

#### Nothing changed

- U. okey / good thank you
- S. do you need anything else
- U. No thank you

I added *do you need anything else?*. Such question would be ask after every request that have been fullfilled by the system.

### D1 Annotated

```
> U. <greet>Hello</greet>/
     <request:find>search for a <field>keyword</field> /pause/
        <keyword>human annotated dataset</keyword></<request>
> S. <greet>Hello</greet>/
     <turn keep>let me check</turn keep> /
     <fail:find>Sorry I cannot find a </item_type>paper</item_type> that
>
        have a keyword<keyword>human annotated dataset</keyword></fail>
>
> U. <feedback: ne>Strange</feedback> /
     <request:list_papers_folder>what items do you have under r
>
         /pause/ <folder>datasets</folder>folder</request>
>
> S. <ans:list_papers_folder>Under the dataset I have /pause/
       t papers>
          <paper:title>wizard of Wikipedia knowledge powered
```

```
conversational
              agents</paper>
 >
           <pause>/pause/
           <paper:title>introducing man tls a novel domain information
              seeking dialoguesdataset</paper>
           <pause>/pause/
           <paper:title>dia two</paper>
           <pause>/pause/
           <paper:title>IREM TITLE</paper>
        </list papers>
      </ans>
 > U. <user intercept>just one moment</user intercept>
 > S. <feedback:pos>yes</feedback>
 > U. <kepp turn>let me check</kepp turn><pause>/pause/</pause>
 > S. <feedback:pos>0k</feedback>
 > U. <request:change>ok so <change:from>the dia 2</change>
         item / can you change <field>the title</field> to
         <change:to>human annotated dialogues dataset for natural
         conversational agents</change></request>
 > S. <ans: change>Ok <change:from>dia two's</change>
         <field>>title</field>> is changed to
         <change:to>human annotated dialogues dataset for natural
         conversational agents</change></ans>
      <ask:goal>do you want to change anything else</ask>
 > U. <request:query>Yes [change theee] what is <field>the document
         type</field></request>
 > S. <ans:query>journal article</ans>
 > U. <confirmation>ok ok [so aah]</confirmation>
      <request:keep>keep it</request> /
 >
      <request:count>[so can you tell] [how how so] do you have
 >
         authors how many <field>authers</field> do you
         have</request>
 > S. <ans:count>I have <count>four</count> <field>authors</field>
         </ans>
 > U. <feedback:pos>okey / good thank you</feedback>
 > S. <ask:goal>do you need anything else</ask>
 > U. <feedback:neg>No thank you</feedback>
```

# Dialouge 2 Distilling process

### D2 Transcription

Sometimes the user likes a paper and wants to search for other papers for the same authors. The user does not remember the full title but knows the keyword. After finding the paper, they ask for other papers that have the same authors. To limit the dialogue length, the user will ask about a thesis for the first author.

- **U.** Hello / aah please find the paper that have the key word compositionality
- **S.** Just a moment / let me check / aah yes I found two papers the first
- 5. one is compositionality decomposed how do neural networks generalise
- **S.** / the second one is on the realization of compositionality in neural
- **S.** networks both are journal articles
- **U.** What is the name of the first author of the first paper
- S. aah Hupkes [Hupkes] Dieuwke
- **U.** OK / so we have any thesis for the same author
- **S.** Yes / we have thesis titled hierarchy and interpretability in neural
- **S.** models of language processing
- U. Yes OK thank you
- **S.** do you need anything else
- U. thank you

### D2 Distilled

Below each USER-SYSTEM turns, I will provide a short description about what change. Also, generally speaking, if the system turn has a hesitation or it is syntactically uncorrect it will be fixed.

- **U.** Hello / aah please find the paper that have the key word compositionality
- **S.** Just a moment let me check / yes I found two papers the first one
- **S.** is compositionality decomposed how do neural networks generalise
- **S.** the second one is on the realization of compositionality in neural
- S. networks

Remove both are journal articles, RELEVANCE/QUANTITY(1) the system presentS the required info only

- **U.** What is the name of the first author of the first paper
- **S.** The author name is Hupkes Dieuwke

CONFORMATION the system uses echo, implicit or explicit feedback.

- **U.** OK / so we have any thesis for the same author
- **S.** Yes / we have a thesis titled hierarchy and interpretability in
- **S.** neural models of language processing

Nothing changed.

- U. Yes OK thank you
- S. do you need anything else
- U. thank you

Nothing changed.

#### D2 Annotated

```
> U. <greet>Hello</greet> / <request:find>aah please find <item type>the
        paper</item> that have the <field>keyword</field>
>
        <keyword>compositionality</keyword><keyword>
> S. <turn keep>Just a moment let me check</turn keep> / <ans:find>yes
        I found <count>two</count> <item type>papers</item type>
       <list papers>
>
         <paper:title>the first one is compositionality decomposed how
             do neural networks generalise</paper>
         <pause>/pause/</pause>
         <paper:title>the second one is on the realizationof
             compositionality in neural networks</paper>
         <pause>/pause/
         <paper:title>dia two</paper>
>
         <pause>/pause>
          <paper:title>IREM TITLE</paper>
>
      </list papers>
>
    </ans>
>
> U. <request:query>What is <field>the name of the
        <list pos>first</list pos> <field>author</field> of the
        <list pos>first</list pos> <item>paper</item></request>
> S. <ans>The <fields>author name</field> is Hupkes Dieuwke</ans>
> U. <request:find>OK / so we have any <item>thesis</item> for
       the same <field>author</field></request>
> S. <ans>Yes / we have a <item>thesis</item> <field:title>titled
        hierarchy and interpretability in neural models of language
        processing</field></ans>
```

- > U. <feedback:pos>Yes OK thank you</feedback>
- > S. <ask:goal>do you need anything else</ask>
- > U. <feedback:neg>thank you</neg>