Intelligent (Task-Oriented) Conversation Assistant for Course Selection

Progress Report



Information Technology Capstone Project

COMP5703/5707/5708

Group Members

1. Shengyuan Sun (460257820)
2. Rui Chen (470111585)
3. Quan Chen (470199228)
4. Biying Wang (470067400)

Table of Contents

[Table of Contents i](#_Toc521413584)

[1. Progress Status 1](#_Toc521413585)

[2. Roles & Responsibilities 2](#_Toc521413586)

[3. Individual Achievements 2](#_Toc521413587)

[4. Group Collaboration 2](#_Toc521413588)

# Progress Status

|  |  |
| --- | --- |
| **Project Name** | CS17 Intelligence(Task-Oriented) Conversation assistant for course selection |
| **Project Start Date** | 6/ 3/ 2019 |
| **Project Manager** | Biying Wang |

|  |  |
| --- | --- |
| Project Description | The project focuses on using NLP and other technologies to build a dialog system to analyse and answer the questions that students ask in terms of course units on University of Sydney education system |

|  |  |  |
| --- | --- | --- |
| Project Status Report | # | Date: 5/ 4/ 2019 |

|  |  |  |
| --- | --- | --- |
| **Status Item** | **Status up to last week** | **Planned for this week** |
| **Major deliverables** | Analysis the realated dataset, finding the solution of design the intent and slot.  Finding the question template we can used in our project | A dialog management demo. |
| **Planned delivery date** | 28/ 3/ 2019 | 5/ 4/ 2019 |
| **Major issues** | The question template which we used should related to our project, And before we design the question template we need ensure the intent and slot had well design | The dialog management design is a intrgation with dialog tracker, information structure, and database and rule based.  We also need identify some condition to test the sysem. |
| **Major risks** | The risk of this week is first we may can no find the suitable question template, and the intent and slot have not well designed | 1, intent design need to consider to detail, in the system, if the intent design too general, we need design other method for the right question, if the intent too much it require too much training data.  2, for each rule, it require the a query sentence for seek answer from database.  3, the design of rule base, do we need key word or entity ? |
| **External dependencies** | Slack, Github, Zoom | Slack, github, Zoom |
| **Estimated effort (hr)** | 20hr | 40hr |
| **Recorded effort (hr)** | 20hr | 45hr |
| **Status (R, Y, G)** | red | yello |

# Roles & Responsibilities

Shengyuan Sun

Role: developer

Responsibility:

* Design and code the dialog tracker
* Design and code the rule base
* Design and code the information structure
* Design and code the dialog management
* Design the intent and slot
* Presentation

Rui Chen

Roles: Analyser and Developer

Responsibility:

* Write partial of proposal report and help to format it
* Design intents and slots
* Find a method to generate template for raw questions generating
* Write literature review for report

Biying Wang

Role:

Responsibility:

* Cheak weekly deliverables
* Check meeting time, location and meeting topic
* Summary the frequent question in the interview
* Combine frequenct question with CUSP structure and make an Excel table for that
* Discuss intent and slot rule with team

Quan Chen

Role: Developer

Responsibility:

* Back-end database system building and data collecting
* Help to design the whole process of system (such as slot and intent)

# Individual Achievements

In this week, We start code the program based on our architrture.

The first task is determine the rule structure. The rule is simple like if A and B then C. so In our system, I design the rule if {slots} and {entity }then answer template and SQL.

The inforamtion tree, a big point is that the information tree is not the intent, the information tree is based on the CUSP data structure. The information tree is a map for intent to track the information is needed for related intent, when there is a intent changing, the information tree can help to track the intent.

The dialog tracker part, a dialog tracker have two functions, first one is store all information between the user and chatbot, the second function is to track back to the intent in the before this dialog.

The dialog management ia a system to integrate all part, a function is to manage how to deal with when intent changing and other condition happened.

The result is:

图片包含 屏幕截图

描述已自动生成

# Group Collaboration

Slack

# 图片包含 屏幕截图 描述已自动生成

Github 

Trolle

图片包含 屏幕截图

描述已自动生成