OpenMind Documentation

Release 0

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May 11, 2018

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CHAPTER 1

Introduction

Nowadays Digital Personal Assistants (DPA) become more and more popular. DPAs help to increase quality of life especially for elderly or disabled people. The system is designed to use the DPA as a learning platform for engineers to provide them with the opportunity to create and test their own hypothesis. The DPA is able to recognize users' commands in natural language and transform it to the set of machine commands that can be used to control different 3rd-party application.

CHAPTER 2

Instaliation

1. Install dependency from file instal_dependenses.bat

2. Download project CoreNLP

3. Install JDK 1.8 (Required for CoreNLP)

4. Make a copy of file src/configs/default_config.ini in the same folder and name it "config.ini". It allows you to change settings without conflicts with VSC.

5. Download W2V for English and put it in folder data with name "word2vect_300.bin". (Recomended Google News W2V 300)

6. Run CoreNLP

7. Run src/Main.py

CHAPTER 3

Architecture

In project 5 moduls can be lighlited:

1. Intent processor application is responsible for handling particular user's intents

2. Language processing module provides API for natural language modules

3. Translation module translates unsupported by the DPA languages into supported one

4. Text similarity module is responsible for measurement of text equality

5. Information extraction module retrieves payload information from text

CHAPTER 4

Papers

Open source platform Digital Personal Assistant: https://arxiv.org/abs/1801.03650

CHAPTER 5

Other

The Digital Personal Assistant uses Yandex Translation engine.