ONLINE API AND CHATBOT APPLICATION

Online API and Chatbot Application

- Xunfei - https://www.xfyun.cn/
- TTS Speech Synthesis [online]
  - $ roscore
  - $ rosrun xfei_asr tts_subscribe_speak
  - $ rostopic pub xfwords std_msgs/String “hello world”
- Speech Recognition [online]
  - $ roscore
  - $ rosrun xfei_asr iat_record
- Simple Chatbot Development
  - TalkBack: rchomeedu_speech/scripts/**talkback.py**
  - PartyBot: rchomeedu_apps/rchomeedu_partybot/scripts/**partybot.py**

Google Text-to-Speech [online]

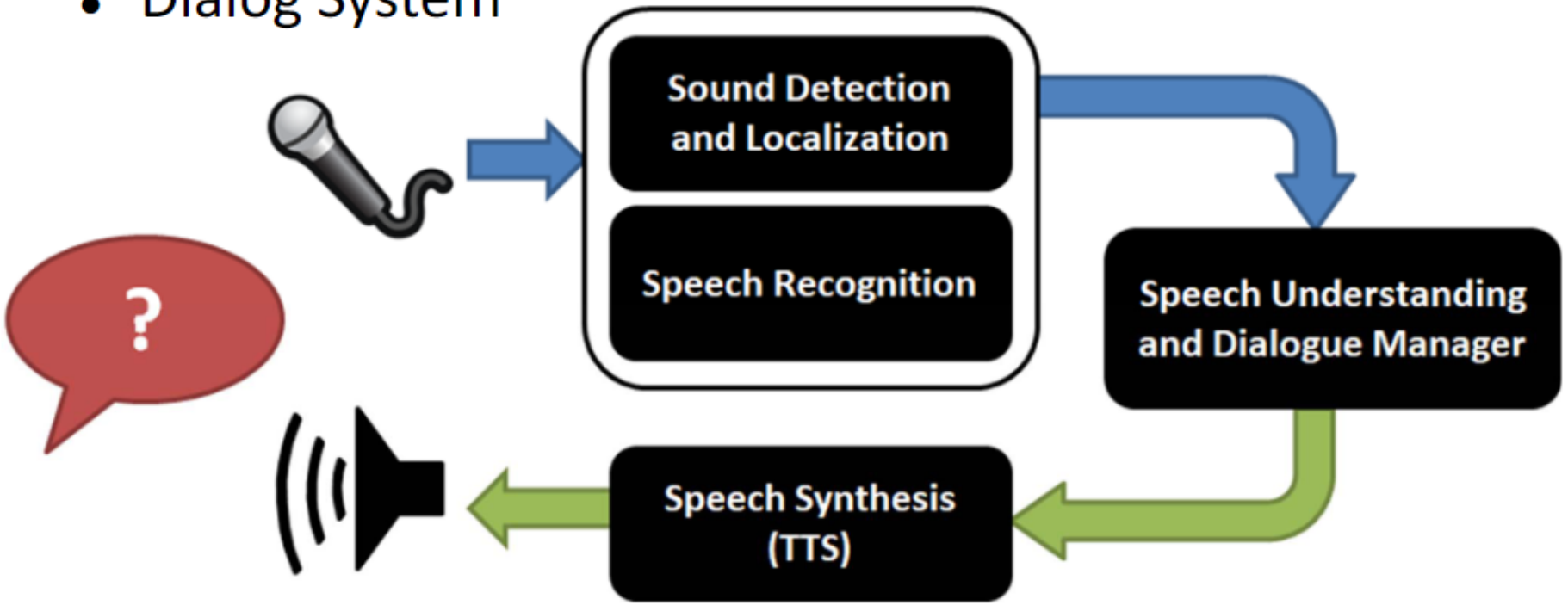
- gTTS – https://pypi.org/project/gTTS/
- Documentation – http://gtts.readthedocs.org/
- Setup
  - $ pip install gTTS
  - $ sudo apt-get install mpg321
- Sample code and execution
  - $ roscore
  - $ rosrun rchomeedu_speech **google_tts.py**
  - $ rostopic pub -1 /input std_msgs/String “hello world”

Google Speech Recognition [online]

- SpeechRecognition – https://pypi.org/project/SpeechRecognition/
- Setup
  - $ pip install SpeechRecognition
- Sample code and execution
  - $ roscore
  - $ rosrun rchomeedu_speech **google_sr.py**
  - $ rostopic echo /result

More Speech Interaction

- Other Language Support
- Sound Detection and Localization
- Speech Understanding and Dialogue Manager
- Dialog System



Exercise: Location Commands

1. Create a new vocabulary for location commands using lm mode (language model mode).
   - Location examples: Kitchen, living room, bedroom, dining room.
2. Create a new node to subscribe to the lm_data topic and display the data in the terminal.