CSME 206A Natural Language & Speech Processing **Spring Semester**

Lecture 9: Python for Speech Recognition

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9.1 Python for ASR

The python is open source language, hence can be freely downloaded and used, both for linux and windows environments. The major tools for this purpose are available at the URL *code.google.com/p/pyspeech/*.

speech.py is a python module that provides a clean interface to windows voice recognition and text-to-speech capabilities. This module is available at *http://pypi.python.org/pypi/speech/*. Here is a very simple program that repeats whatever it hears from you say, until you say "turn off".

```
import speech
while True:
    phrase=speech.input()
    speech.say("you said %s" %phrase)
    if phrase=="turn off":
         break
```

The *speech.input()* waits until it hears you.

The following section is code which does wait for input but does some thing, and when you speak, it accepts.

```
 input speech
 def respose(phrase, listener):
      speech.say("you said%s" %phrase)
      if phrase=="turn off":
           listener.stoplistening()
listener = speech.listenforanything(repose)
#your program can do any thing now, and when spoken word is heard,
#respose() will be called on a separate thread

import time
while listener.islistening();
      time.sleep()
       print "still waiting...."
```

9.2 Dragonfly

It is a speech recognition framework. It is a python package which offers high-level object module and allows its users to easily write scripts, macros, and programs with applications to speech recognition. It supports

the following speech recognition Engines:

- Dragon naturally Speech Recognition (DNS), and
- Windows Speech Recognition (WSR) for Vista.

References

[1] D. Jurafsky and J. Martin, "Speech and Language Processing," *Pearson India*, 2002.