

# Myro Speech Recognition and Learning

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# Project Goals

- Allow Myro to listen for voice commands and execute them
  - Do this by interfacing with PySpeech module
- Allow Myro to learn new commands that are built from previous ones
- Implement proper error checking for speech recognition
- Provide a variety of basic commands to build new ones from

# CRC Card #1

## Speech

### Responsibilities

Listen from Microphone

Interface with Windows API

### Collaborations

Microphone

PySpeech



# CRC Card #2

## CommandListener

### Responsibilities

Listen for command names

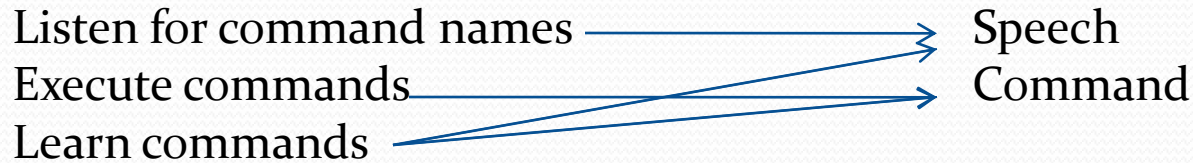
Execute commands

Learn commands

### Collaborations

Speech

Command



# CRC Card #3

## Command

### Responsibilities

Receive Command

Run Command

### Collaborations

Myro

CommandListener



# Demo

- Basic Commands:
  - Go: Move forward for one second
  - Back: Move backward with a caution tone
  - Left: Turn left with turn-signal
  - Right: Turn right with turn-signal
  - 360: Do a 360-degree turn
  - Picture: Take a picture and upload to website
  - Follow: Keep distance between obstacle constant
  - Sound: Make a tone based on distance to obstacle
- Learning:
  - Learn: will prompt for command name, number of sub-commands and the sub-commands

# What Was Learned

- How to use PySpeech with Windows API
- Troubleshooting speech recognition errors
- Better understanding of Python
- Dynamic data structures

# References

- PySpeech - <http://code.google.com/p/pyspeech/>
- Dropbox - <http://www.dropbox.com/>
- Myro -  
[http://wiki.roboteducation.org/Myro\\_Hardware](http://wiki.roboteducation.org/Myro_Hardware)