Team Members

- Nicholas Harrington **nlharr@mit.edu**

- Tao Ben Schardl **neboat@mit.edu**

Project Description

Our goal is to make a small vocabulary, isolated word speech recognition system. The speech recognition hardware will have two basic modes of functionality. In the first mode the user will train the system to recognize a set of words, while in the second mode the system will recognize those words when they are spoken by the user. This system's recognition mode will additionally drive a joystick interface to a computer by translating the recognition of different words into distinct joystick output signals. The effect of this will therefore be a voice-driven joystick for a PC.

The hardware itself will be broken up into three modules. The first will convert the audio input into a set of vectors for use in comparing words against each other. This module will encompass endpoint detection for words and parametrization of small sections of incoming audio in such a way that comparison between words will be possible. The second module will handle storing the trained words and comparing incoming words against them, utilizing either DTW or HMM methods. The final module will handle formatting the output to the computer.