Gesture Gym: A Therapeutic Tablet Application

Abstract
Gesture Gym is a touch-screen game designed to improve a the motor skills of stroke patients. It seamlessly reacts to patient performance by changing the difficulty to levels tailored to the patient.

Goals
- Provide accessible, convenient supplement to stroke therapy
- Encourage exercise of hands and arms, like going to the gym
- Create a way to monitor patient progress through hard data
- Distribute the burden of administering therapy

Features
- Single- and multi-touch gameplay modes
- Adaptive difficulty algorithm
- Physician view of patient performance

System Design

Future Work
- Implement additional gameplay modes
- Remote access to patient data
- Fine-tune adaptive difficulty algorithm for greater granularity and to use more data

Conclusions
- Touch-based games can emulate the physical therapy process.
- Gameplay difficulty level can be made to adapt to patient progress.