**Thesis Project Form**

**Title (tentative):** Using a music interface to facilitate motor learning

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### Description

#### Motivation and application domain

The goal of this project is to test the hypothesis that providing music feedback can increase exploration and improve motor learning.

#### General objectives and main activities

The general objectives and activities are:

1. To create a novel task using a body-machine interface that creates a visual/auditory interface based on movement.
2. To test human subjects learning the task – participants will be assigned to different groups where each group will learn with different amounts of audio/visual feedback. Kinematic data will be recorded throughout the training sessions.
3. We will then analyze the data to see if the type of feedback experienced during training has an effect on the learning and retention of the task.

#### Training Objectives (technical/analytical tools, experimental methodologies)

The things that I will learn:

1. Theoretical basis of motor learning and exploration
2. Designing experiments and protocols using a body-machine interface
3. Working and testing with human subjects
4. Data analysis and statistical testing

#### Place(s) where the thesis work will be carried out:

Michigan State University, Department of Kinesiology

### Additional information

**Maximum number of students:** 1

**Financial support/scholarship:** bando giovani