

Move & Play



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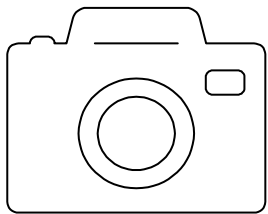
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Objective



Initial Objective

- Application, which enable moving mouse using any colorful object.
- Initially, there were not any ideas how to make this useful.



Move & Play

*Application to play the piano
moving any green object in front
of the camera*



Application Objectives

- Play the sound using colorful object
- Possibility to change the amplitude of the sound (volume)
- Possibility to change the frequency of the sound (sound pitch)

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Methodology



Methodology

1. Image recognition
2. Playing sounds
3. Playing sounds depends on image recognition
4. Testing by piano players

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Implementation



Used Technology

- Python 3.7
- Pyaudio library
- opencv-python library

Code is accessible there:

https://github.com/dawtom/kognitywne_sledzie/



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Evaluation



Evaluation

Move & Play was tested by one beginner player, two intermediate player and one advance player.

Each player tried to play simple melody.



Evaluation

- Nice toy
- Image recognition does not work ideally
- Image recognition working depends on the lights, the day time

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Discussion



Discussion

- Toy was generally approved

Some proposition to improve:

There should be possibility to stop playing the sound and manipulate the durability of the sound.



Discussion

Proposal changes:

- Green object turn on the sound
- Another colorful object turn off the sound
- Sound lasting until you turn off them

Therefore, it would be easier to play something interesting.