

iSynth

*The Quest for a "Better"
Music Synthesizer*

Part IV :
Scope Redefinition,
Choices & Current Progress



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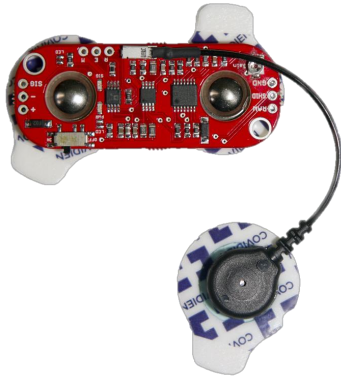
Bangalore 560 012, India

Redefinition of Scope

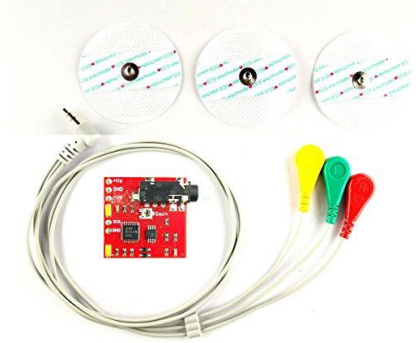
- Construct a Virtual Musical Keyboard :
 - Keyboard layout is printed on a sheet of paper
 - Grab user inputs via a Camera to detect which key(s) were pressed
 - Determine the velocity of a keypress by using an EMG sensor
 - Synchronize the data from the camera as well as the EMG sensor & play the note associated with keypress at the actuated velocity.

Choice of EMG sensor

- 3 options :



1. Myoware
muscle sensor
AT-04-001

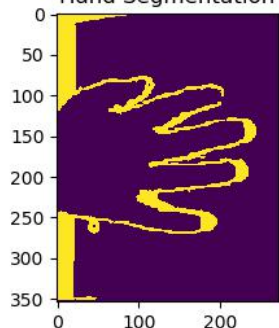


2. EMG Muscle
Signal Sensor Kit
from RoboIndia

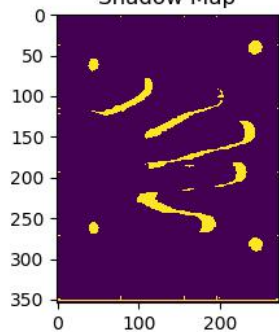
3. Build one by
ourselves !

Current Status

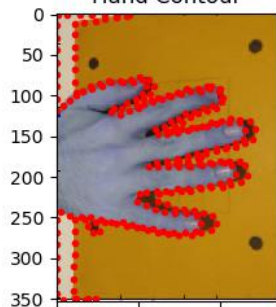
Hand Segmentation



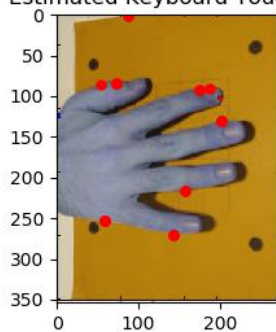
Shadow Map



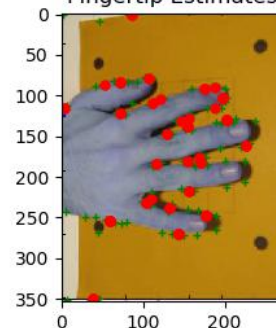
Hand Contour



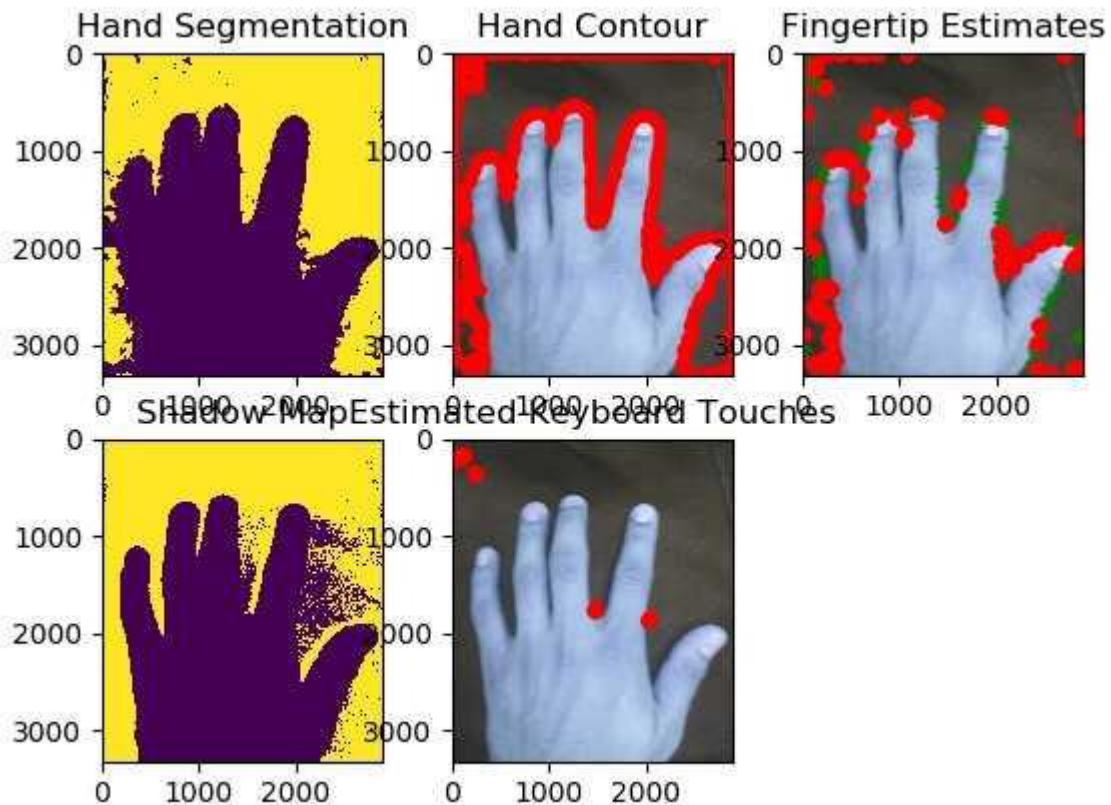
Estimated Keyboard Touches



Fingertip Estimates



Current Status



Thanks!

Any questions?

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