

Sal the Robot Head

Written by Lior

Wednesday, 02 February 2011 03:09 - Last Updated Wednesday, 23 February 2011 00:02

Sal is a robotic head that makes head and eye movements to follow interesting things in its environment (the activity of people and objects in its surroundings). In addition, the head will be capable of locating and recognize visual objects in real time.

For now the robot can perform Tarot card readings or other object recognition using SIFT.

The software is available from <http://ilab.usc.edu/toolkit/> under the newvision2

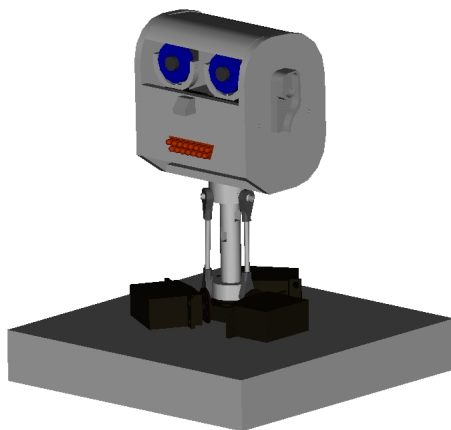
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Sal the Robot Head has the extra features in the start track dvd set.



[Head.dwg](#) [HEAD COV.dwg](#) [EAR.dwg](#)

Software Screen-shot

control panel

```
>> esv compact display -> true
esv extended display 2
esv disp zoom 4
esv input reduce 0
esm use fixed false
esm fixed x 20
esm fixed y 15
dynamic feedback 1.5
esm inertia half life 60
esm inertia strength 100
esm inertia radius 32
esm inertia shift thresh 5
esm ior half life 6.5
esm ior strength 8
esm ior radius 32
ese dynamic fofa true
ese fofa size 180
ese fofa min size 32
ese fofa max size 360
ese segmentation thresh 0.5
ese segmentation scale 4
confidence thresh 0
eit ignore nomatch false
eit add patch reader
speech queue size 1
track target true
neobrain use head true
neobrain relax neck false
neobrain boringness thresh 80
neobrain err tolerance 1
neobrain dist tolerance 2
neobrain track delay frames 20
neobrain big err frames thresh 500
neobrain target frames thresh 300
neobrain no move frames thresh 1000
neobrain stop track delay frames 10
head info eye tilt pos -1
head info eye pan pos 0.2
head info head pan pos -1
neobrain use speech false
neobrain refresh speech file false
neobrain excitement thresh 220
evc intensity weight 191
evc color weight 191
evc orientation weight 191
evc flicker weight 191
evc motion weight 255
evc multithreaded false
evc num orientations 4
evc color smoothing true
evc num directions 4
evc motion thresh 12
evc flicker thresh 20
evc multi scale flicker true
pause false
remote command#00 false
in training mode false
in ObjRec mode false
grab frame true
commit training image false
confirm commit ?? false
training label#00
font size 6
```

Sal

peak 0 in 128x128 fofa @ (152, 40)
00:00:57.157 #001712 [29.97fps, 64.3%CPU]

| Metric | Value |
|------------|--------|
| dvx/db | 0.19 |
| dfactor | 0.74 |
| boringness | 53.05 |
| excitement | 156.46 |
| sleepiness | 7.05 |
| confidence | 0.00 |
| cpu% | 64.33 |
| fps | 29.97 |

neovision2::submain: frame 1400: 29.98 fps
neovision2::submain: frame 1450: 29.96 fps
neovision2::submain: frame 1500: 29.97 fps
neovision2::submain: frame 1550: 29.97 fps
neovision2::submain: frame 1600: 29.97 fps
neovision2::submain: frame 1650: 29.97 fps
neovision2::submain: frame 1700: 29.97 fps

Shell

```
robot@iLab13.usc.edu: /ho
```

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Assembly Drawings

{gallery}Robots/Sal/Assembly{/gallery}