



Overview

In our society, there are people who have critical physical disability, some of them have paralysis, cannot move any body part except only eyes and/or head. Our system will make them able to operate wheel chair and task manager using their eyes, voice and/or head gesture.







- Overcoming any type of physical disability using eyes, voice and/or head gesture
- Operating task manager and wheel chair using eye gaze/eye blink/head gesture/ voice command
- Make disabled persons able to do everyday works





Who can use this with which features

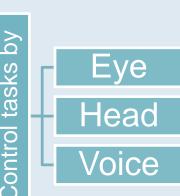
Person's active body part					Feature			
Hand	Leg	Eye	Head	Speak	Voice	Eye- gaze	Eye- blink	Head- guesture
×	×	~	×	×	×	~	~	×
×	×	~	×	✓	~	~	✓	×
×	×	~	~	×	×	~	~	~
×	×	~	~	✓	•	~	~	~
×	×	×	×	~	~	×	×	×



Task manager to control both menu and wheel chair

The person can do the following things with this task manager.

- Control wheel chair
- O SMS
- Email
- Video
- Music
- News
- Turn on/off light
- Turn on/off fan









Controlling menu with **eye blinks**

One can use only blinks to navigate through the whole task manager.

Blink right

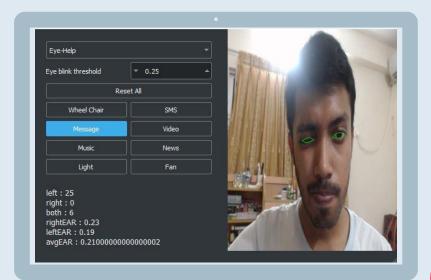
Move selection right

Blink left

Move selection left

Blink both

Press selected menu

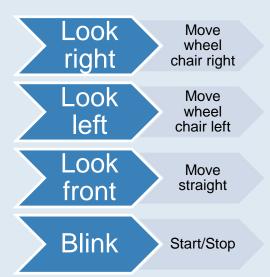


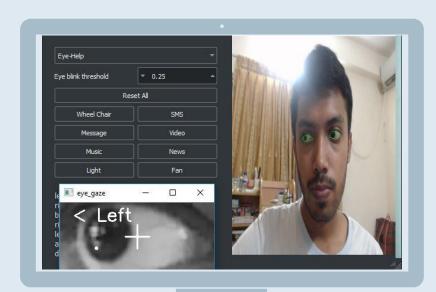




Controlling wheel chair with **eye gaze**

One can go 3 directions with eye gaze and start/stop with eye blinks.



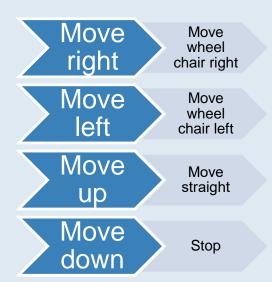


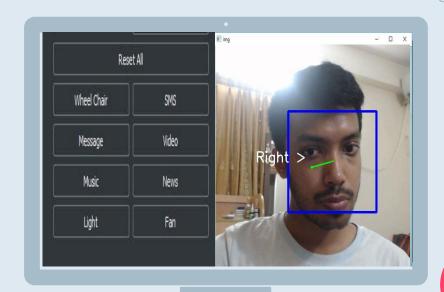




Controlling wheel chair with **head gesture**

Go 3 directions with head gesture and start/stop with eye blinks.



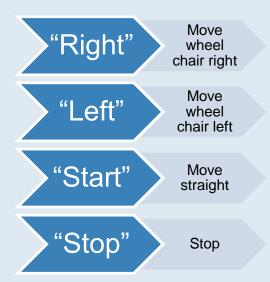


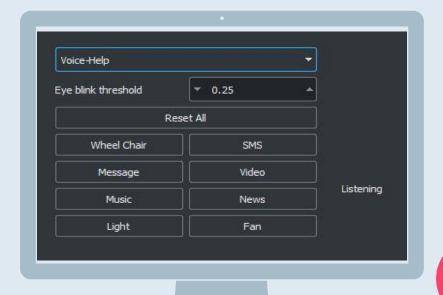




Controlling wheel chair and task manager with **voice command**

Tell the task manager what to do.









Our Future Plan

- ☐ Increasing the accuracy of eye gaze, eye blink, head gesture and voice command
- Adding more real life features
- Making this system more robust, accurate and deployable for general users







Thank You!

Any questions?

