Technology for Special Needs Education

Project

Hands Free Gaming

To **enable** people with *Physical and Mobility Impairment* play games.

The Problem

Games have become essential part in our day to day lives and an important stress reliever for today's generation but people with physical and mobility impairment face various difficulties which can be tackled with technology.

This presentation discusses mainly about playing video games and how technology can be used to help people with physical and mobility impairment allowing to use keyboard buttons by making some gestures.
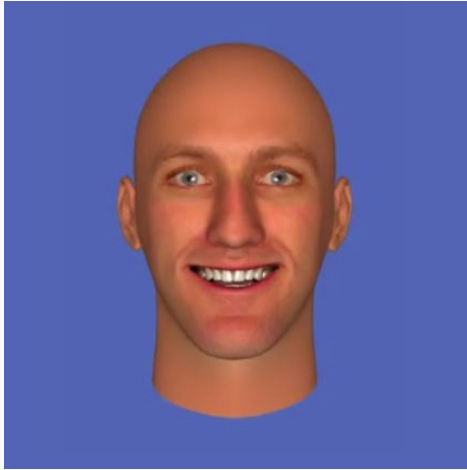
The solution

Image Processing

The buttons in the keyboard can be stimulated by reading the head movements using image processing allowing user to play games without even touching the keyboard.

How it works

The user can control the game using his head movements
As shown below,

He/she will be able to simulate the up, down, left and right key presses.

No face movement

Right movement

Left movement

The technology:

Python + OpenCV

Working model

Incoming video feed

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Use of OpenCV

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Simulating the key-press

Thank You