Hand Motion Control of an Audio Player

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Abstract

Recent technology has taken advantage of motion sensors to accomplish basic commands usually implemented through switches or remote controls. The benefits of this motion control allows the user to conveniently command the devices from a distance without the necessity of a remote control. The hand motion controller created in this project will function as an audio player by implementing basic commands, such as volume control, audio playback, rewind, fast forward, and song selection, through hand gestures. The user will wear an LED on his/her hand through which hand motions will be detected by an optical sensor. Once the motion is tracked, the controller will process the motion based on the geometric shape detected by the sensor and associate it with the appropriate command. Once the hand motion is mapped to its function, the audio player responds with the correct control of an audio file stored in the labkit's ZBT memory.