**CHAPTER 10**

**SCOPE FOR FUTURE WORK**

In future, we can integrate various elements to the existing system to make the project more advanced and a complete product. The modifications/upgrades can be as follows:

1. **Speech and Brain Signal Controlled Wheelchair**
2. The existing system can be upgraded to wheelchair which would be controlled by detecting the **Speech and Brain Signal Controlled Wheelchair**

changes in electroencephalogram (EEG) produced by the brain. This system would be a battle winning factor for all those people with a partially or totally paralyzed body, enabling them to move around without the help of others and help them to become more self-dependent.

1. Wheelchair with Automatic Obstacle Detection and Avoidance

The existing wheelchair can be fitted with an array of sensors which would help in obstacle detection. In addition to this, various artificial intelligence algorithms can be implemented in order to avoid the various obstacles coming in its way of the wheelchair.

1. Wheelchair with location tracking and SMS support

GPS system can be also implemented to know the exact location of the person who is in the wheelchair. Further this GPS system along with some kind of mobile network can be used to keep a track of location of the person using the wheelchair and also can save the person in case of any mis happenings.

1. IOT wheelchair

The wheelchair can be integrated with the various IOT devices present indoors. This would help in performing various operations inside a house with ease. IOT operations include controlling lights, opening/closing doors, turning on/off various devices. All these operations can just be controlled by a click of button present on the controller band.

A delay of 5 seconds can be seen between the controller on the hand and the wheelchair when the device is tilted from one direction to another. It also seen that Bluetooth can provide a good signal of range of about 10 meters.

Therefore, we have completed our aim of building a Hand Gesture Controlled Wheelchair which can used for physically challenged people at an affordable cost.