

## Gesture Controlled Drone

The basic idea for this project is create a drone that is controlled by human gestures. A computer application will be created to recognize basic human gestures and based on the specific gesture the drone will go up, left, right, down, etc. Communication between the computer application and drone will done over some wireless communication protocol (WIFI, Bluetooth, Zigbee). For example, if using Zigbee, there will be Zigbee transmitter on the computer side (USB dongle) and a Zigbee receiver on the drone side. The drone will be built from scratch and will utilize a MSP430 microcontroller or equivalent. The receiver on the drone side will be connected to the MSP430 microcontroller via I2C, SPI, or UART. In essence, based on the recognized human gesture a specific message is sent over Zigbee and decoded by the drone. Based on the decoded message received by the drone, it will either go up, down, left, right.

### Requirements:

1. The drone will utilize a MSP430 microcontroller or equivalent
2. The drone will be powered by a 9v battery
3. The system will utilize Zigbee or equivalent communication protocol
4. A computer application will be used to recognize gestures
5. The computer application will be coded in Python
6. The drone will be able to decode messages from the computer application and produce motion based on the message decoded
7. The drone will be able to go up, down, left, right