Steering Control

Roll increases

Steering Control

Roll decreases

**Initialize GPIO, and obtain own IP address**

**Connect to Bluetooth**

**No Response**

**Send String Containing IP**

**Response Received**

**Receive Base station IP Address and Init Camera**

**Main**

**Threads\***

**Setup Camera Streaming Server**

**Receive UDP Message**

**Host Camera Server on HTTP**

**Decode Robot Command**

**Move Robot**

**\*We have multiple threads running for camera streaming server but for purpose of presentation we condensed it**

**No response**

**Connected!**

**Request Camera Stream**

**Receive bytes**

**Process Image data and saves image**

**MSG Received**

**No Msg**

**Send readings to robot using robot IP and UDP**

**Main**

**Thread 1**

**Thread 2**

**Initialize BNO055 sensor**

**Displays to PiTFT**

**Poll BNO055 Sensor**

**Setup Pygame camera image and HUD**

**Exchange IP addresses**

**Connect to Bluetooth**

**Wait for Bluetooth string message**

**Initialize GPIO, and obtain own IP address**