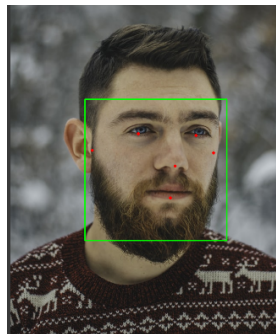


## Face Detection and autonomous tracking using Tello

- The drone will be able to identify faces in the captured footage in real time and then follows the user autonomously to keep the person in the video frame.
- We will accomplish this in 2 steps :
  - 1)Face detection
  - 2) Follow the face
- For face detection, Media Pipe's Face Detection which is an ultrafast face detection solution is used. It comes with 6 landmarks and multi-face support

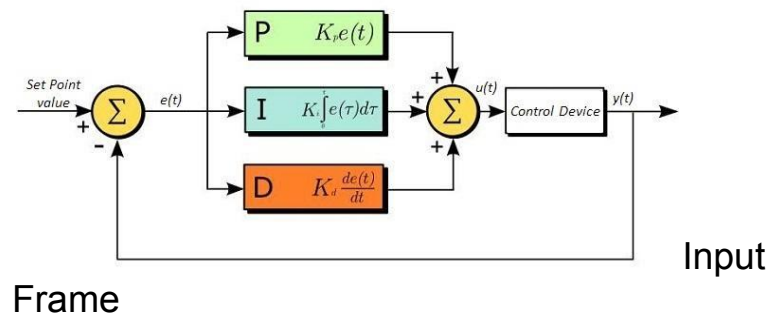
To do : Install media pipe and other required libraries and run the script given in the link to detect faces in real time using camera feed from computer.

[https://google.github.io/mediapipe/solutions/face\\_detection.html](https://google.github.io/mediapipe/solutions/face_detection.html)



Well now we have detected the face

- Making Tello follow face means the face would always be in the center of the frame.
- Movement/Speed of Tello is calculated using proportional-integral-derivative(PID) controller, vector that is multiplied by the movement and helps control the speed of the drone.



Detect Face  
Calculate Movement using PID  
Control Drone