Scientific project

Driving a UR10e with gesture recognition

And after ?

Done in the laboratory ARS Control of the University of

UNIMORE in the field of a Erasmus exchange

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Mediapipe offers multiple solutions to detect our body or object, in this following list I will let you know some projects that can be done with mediapipe.

Improve my package :

1. Add the Face_mesh solution which is included in the Holistic solution that I use in my program.
   Face mesh solution draw 465 differents landmark on your face, in my case that not useful but you can use it to :
   - ➢ To interact to the emotion of the user
     Actual work : https://github.com/Zju-George/RealtimeFER
   - ➢ Create a face recognition program (Can be used as a face id, like the way that we use it to unlock our phone)
     Actual work : https://www.youtube.com/watch?v=5yPeKQzCPdI
   - ➢ Detect open/closed eyes
     Actual work : https://www.youtube.com/watch?v=-TVUwH1PgBs

2. Deal with more than one person in front of the webcam (more than 2 hands on the screen)
   - ➢ Modify the "MAX_NUM_HANDS" variable setted up by Mediapipe
     Help : https://google.github.io/mediapipe/solutions/hands

3. Add the time dimension. Actually, only static positions can be setted up, with time we can create a model that can recognize our mouvement. That can be useful for piloting a robot.

Use other mediapipe solution :

1. Use the object detection solution to :

   - ➢ Detect speed limit of car or other vehicles/object
     Source : https://www.youtube.com/watch?v=j10j8IuKSBI
   - ➢ Detect animals/humans

2. Blur moving object with Mediapipe Bow tracking
   Source :
   https://blog.youtube/news-and-events/blur-moving-objects-in-your-video-with/

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