
Article

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Concept of Using Python to Detect Human Faces and Emotions

In this article, I am trying to identify the multiple areas to develop the features we can able to do using python and machine learning.

Each hospital is every moment trying to improve its quality of service and efficiency using technology and services.

The healthcare sector is one of the very big and vast areas of service options available and python is one of the best technology for doing machine learning.

In every hospital, humans will come with some feelings, if this feeling will understand using technology is make a chance to provide better service.

Here we can combine both of these and in the healthcare sector, I am trying to understand/identify the various options to do a better service.

First, we can try to identify the person and understand their current feeling using machine learning using python.

Anyway, in the Hospital Information system, every patient's at least 1 photo is available, using that photo we can identify the patient, then once the patient reached the hospital using the CCTV and machine learning technique need to identify the feeling of that person.

Multiple types of feelings will see in the hospital facilities.

- 1)Tension
- 2)Calm and cool
- 3)Crying
- 4)Violent Patient / Relative
- 5)Sick Patients
- 6)High Fever Identification

Like the above examples, we can see multiple types of examples.

If one already registered patient came with a high fever, then identify this patient's situation using the CCTV and capture the temperature thermal camera the care staff can give better support makes a very big difference in the hospitality service areas.

If this person with a high temperature is already a registered patient and if that patient is identified using the available photograph, then we can do multiple things.

- 1)If that patient has an appointment today we can arrive at that patient automatically.
- 2)If that patient is marked as arrived automatically then we can save the temperature to the vital entry area, using the same camera we can also identify the height also we can update the area of the vital sign, it will reduce the workload of a nurse.

3) If the temperature is high then one alert will get to the emergency department then they can do emergency support to that patient, this will make more comfort to that patient and reduce the chance of spreading the virus to others.

4) If the patient is identified with more tension so the relation staff can check and do the needful based on their requirements.

5) If a patient leaves the hospital after treatment, then the valet staff gets alert and they can make the patient's vehicle ready, it will reduce the waiting time of the patient.

6) In the hospital we can see some of the patients/relatives will make some violence with reception or with some other persons, in this time normally hospital announces a code, so the respective team will go there and fix the issues. So in this kind of situation trying to start then identify using the AI and alert the respective team then it will reduce the chance of making more noise in that reception.

7) One patient identified as more sick, other than the fever or temperature-related issues, if possible to identify that situation then this one notifies the respective team and they can do the better service there.

8) Sometimes if due for any reason patient forgot to pay the invoice amount, in this time we normally use the patient alert option to notify the due of pending invoices, if this kind of patient reaches the hospital without an appointment and not for their personal cases, then if that patient is identified, then this will notify to the relation team, they can handle that person and they can collect that payment also.

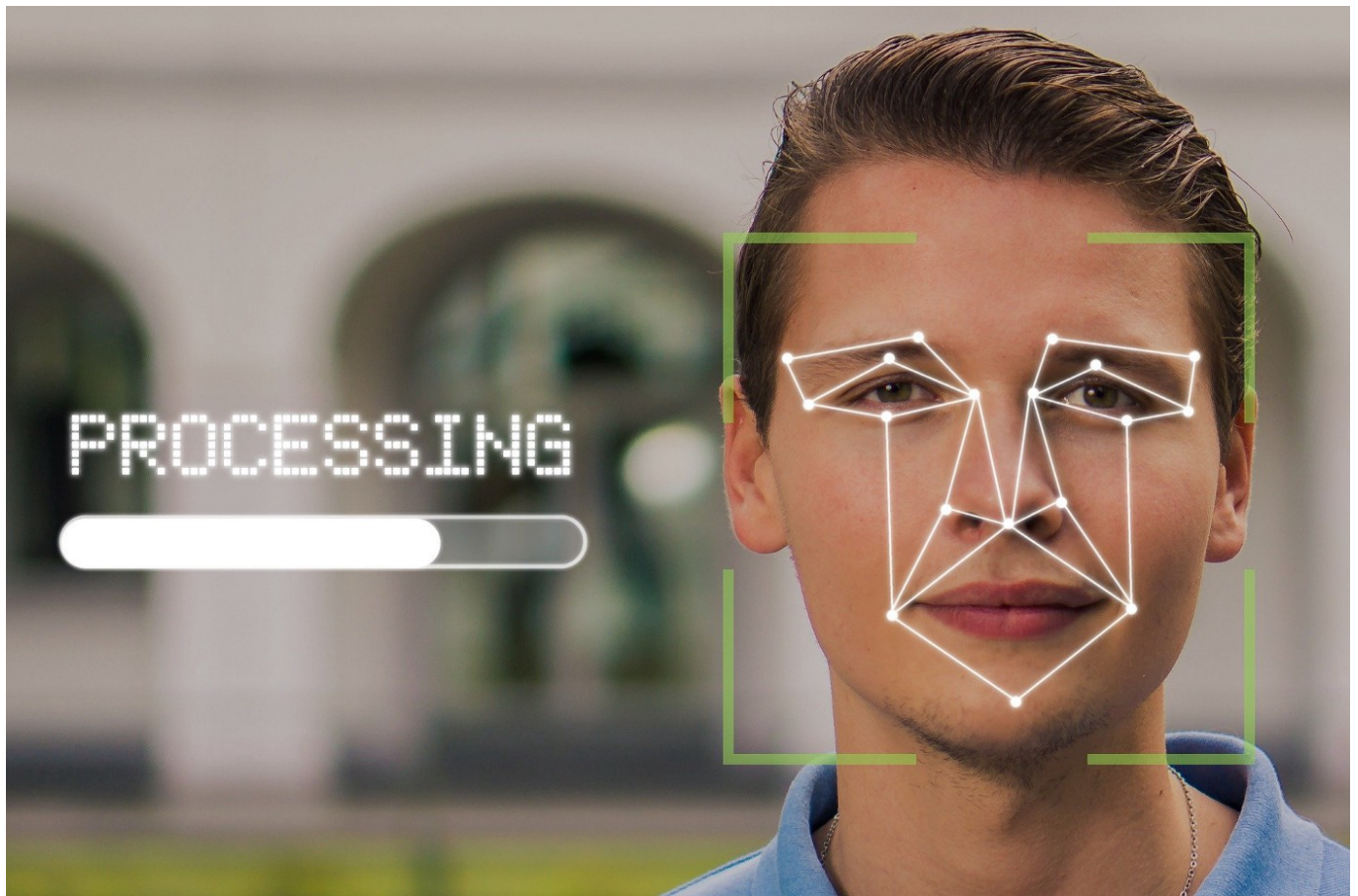
9) Once the patient leaves time identify the patient and send a wishes message to his phone.

10) In the rush hours may be sometimes relations staff can not able to identify each person so maybe they can not able to give more care to the VIP patients in this case using the AI we can the identified patient as a VIP and then notify to the respective relation team and the doctor then they can give the better service.

Another area is using the nearby area camera and entrance camera we can identify the ambulance vehicle and if the ambulance came as an emergency will notify the respective team and they can be ready for the emergency support.

To identify the emergency of the ambulance based on whether the ambulance beaker light is on or off.

These above-mentioned points all only work using machine learning technology, now we all know the best technology for machine learning is Python.



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