<微笑指南>+美膚修修

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Proposal前情提要

- 微笑四方這個盒子是有蟲洞這個功能的。

沒發現這件事，很可能是因為，

~~這件件事本來就不容易發現~~

你站的不夠久，

對面的人也跑得快而已。

Goal

1. 讓短暫停留的他/她知道，「微笑四方」有發現你在注意它。
2. 延長有緣人駐足時間（分散他/她想離開的注意力）
3. 提供~~免整型~~膚質改善作業，讓相見的彼此都有美好的印象。

Method

- Environment Setting
  - *pygame、Face detect (Open source)*
- Tools:
  - *Age and gender detect (API from Microsoft)*
  - *Skin detect (reference from web)*
  - *Skin color smooth (blur, mask…)*

Age and gender Detect

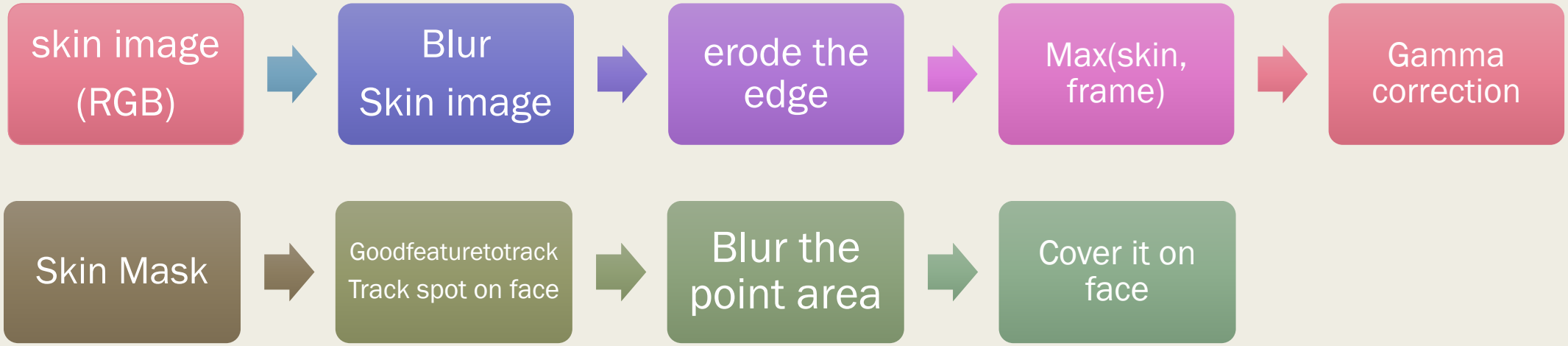
Capture frame from camera → Cogntive_face API → Get the depiction of frame → Extract age & gender from JsonFormat → Show NPC based on your age& gender


```
[{u'faceRectangle': {u'width': 234, u'top': 265, u'height': 214, u'left': 223},
 u'faceAttributes': {u'gender': 'female', u'age': 22.7}}]
```


Skin detect and color smooth

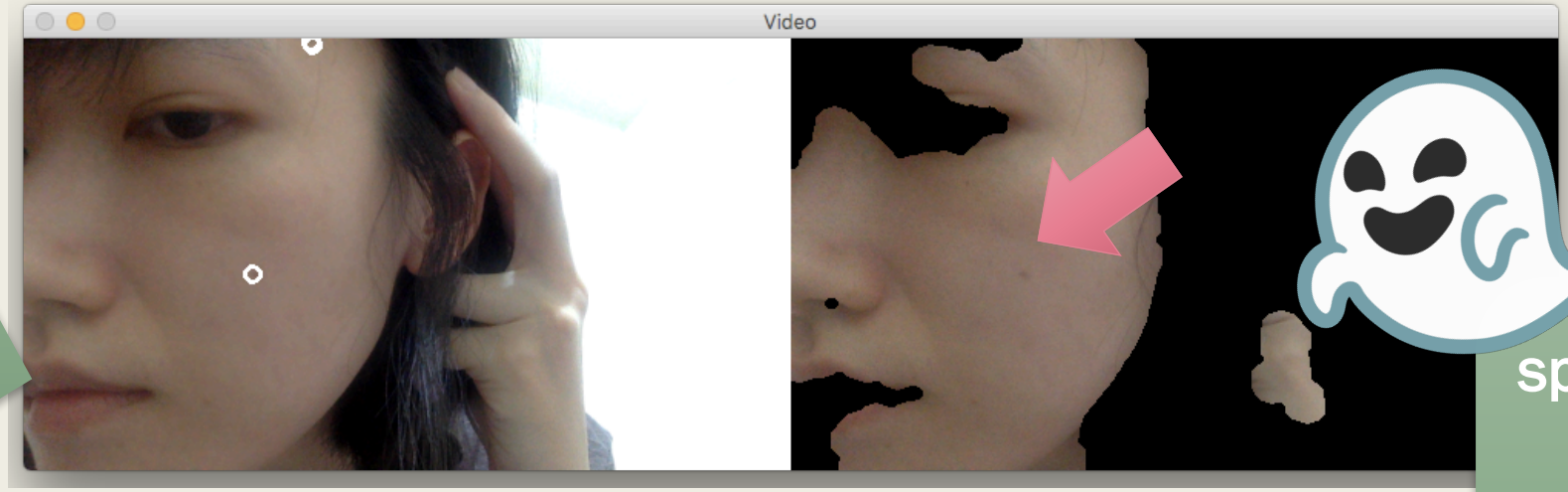
- Skin detect

- Smooth

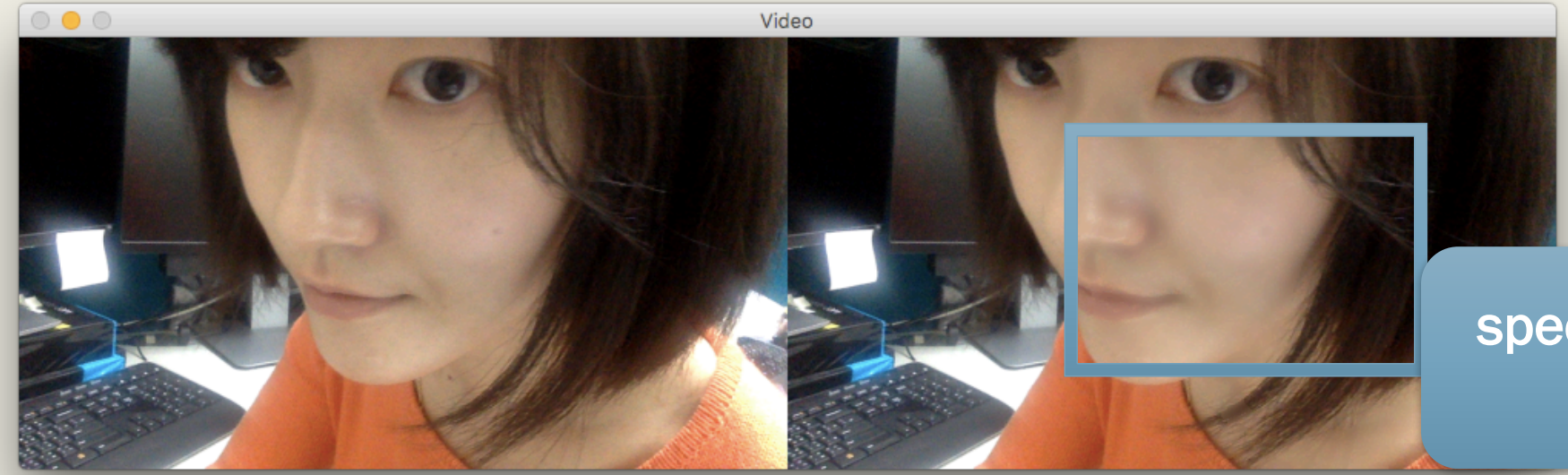


Sample image

Using GoodFeat uretoTrack Detect mole



specifies the region in which the corners are detected.



specifies the region To blur

Demo Time

Discussion and Future work

- Discussion…
  - Skin detect not very stable.
  - GoodFeaturetoTrack not pretty good…, it’s hard to track mole on face.
- Future work
  - Try other ways to detect skin.
  - Add other effect…

References

- Face Detection using Haar Cascades (http://docs.opencv.org/trunk/d7/d8b/tutorial_py_face_detection.html)
- Age and gender detection

  (https://www.microsoft.com/cognitive-services/en-us/)
- GoodFeatureToTrack OpenCV doc.(http://docs.opencv.org/2.4/modules/imgproc/doc/feature_detection.html)
- Skin Detection: A Step-by-Step Example using Python and OpenCV (http://www.pyimagesearch.com/2014/08/18/skin-detection-step-step-example-using-python-opencv/)