

FACE SWAP (5b) - 1. vs 2. vs 3. VERSION



1b



2-3b



4-5b

FACE SWAP - 1. VERSION

1. Find face in src image
2. Extract face from src image
3. Find face in dst image
4. Extract face in dst image
5. Resize both faces to the same size
(size of face that was detected in dst image)
6. Copy src face into dst frame



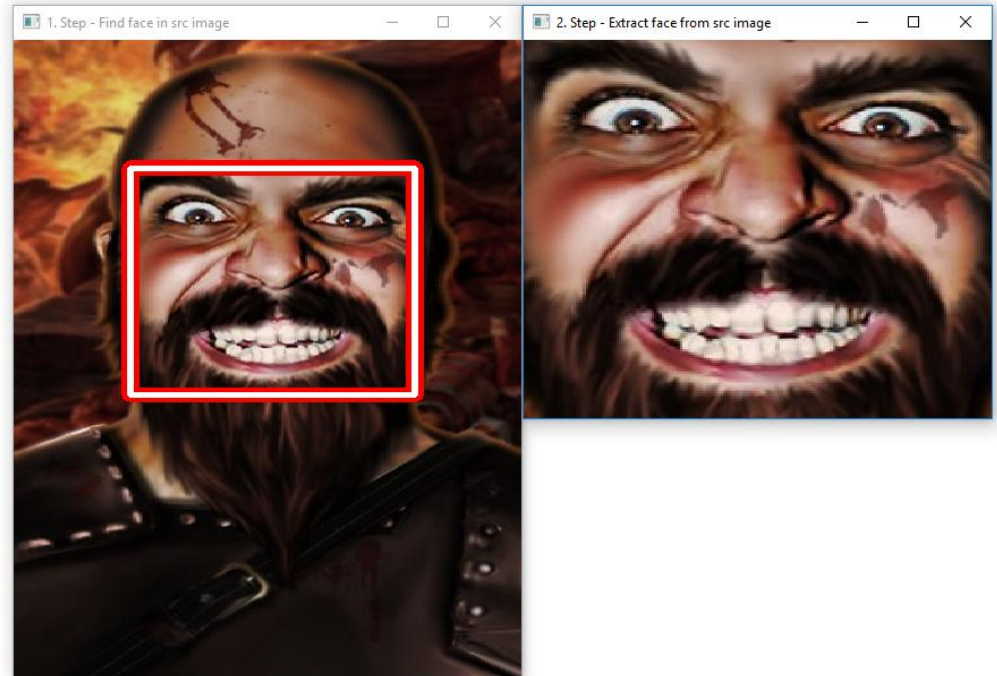
src image



dst image

FACE SWAP - 1. VERSION

1. Find face in src image
2. Extract face from src image

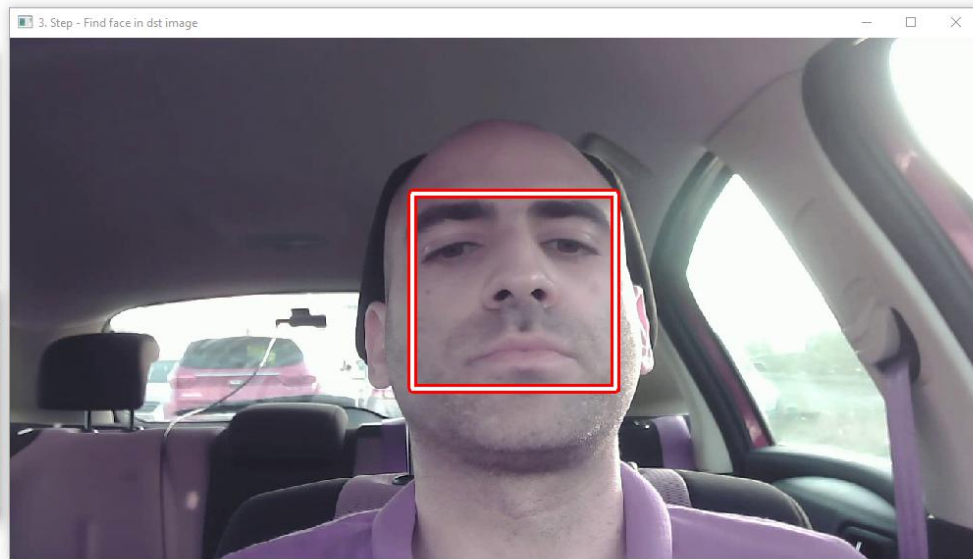
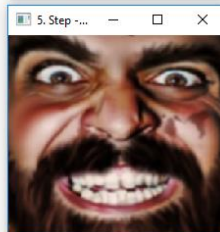
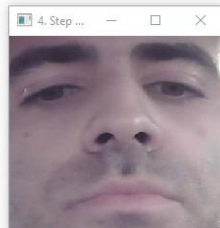


FACE SWAP - 1. VERSION

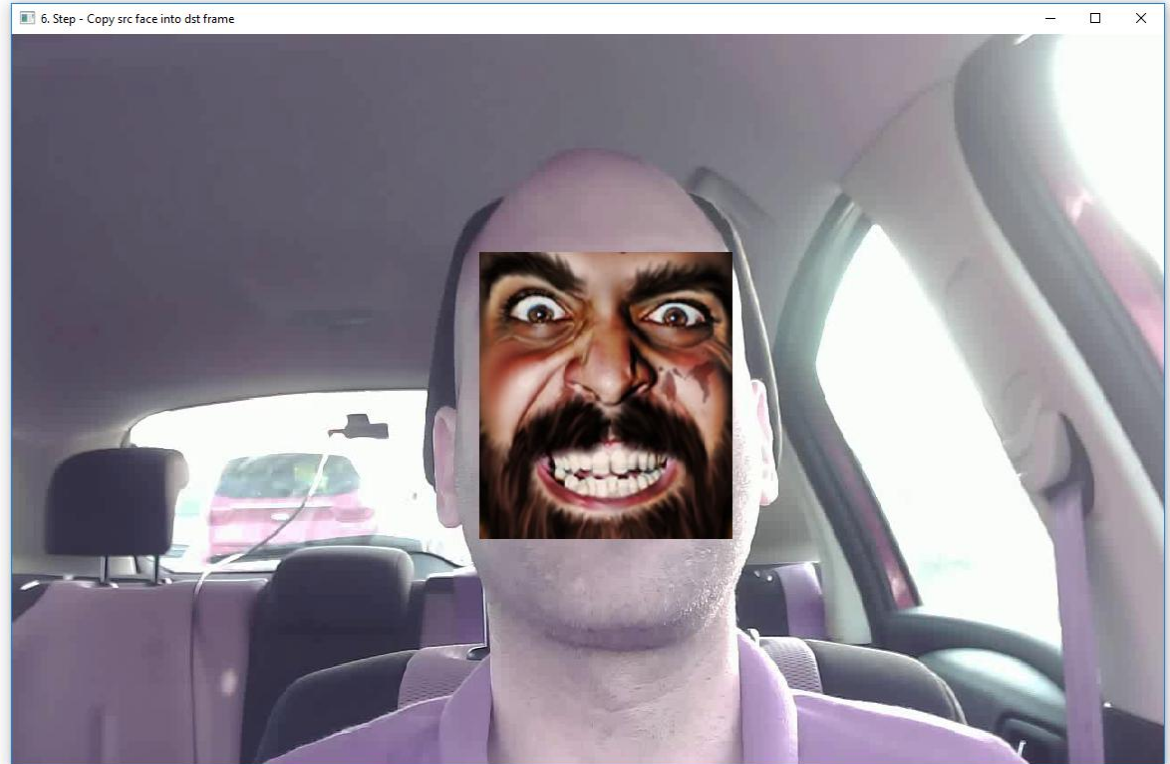
3. Find face in dst image

4. Extract face from dst image

5. Resize both faces to the same size
(size of face in dst image)



6. Copy src face into dst image



FACE SWAP - 2. VERSION

1. Find face in src image
2. Extract face from src image = **src_face_img**
3. Find face in dst image
4. Extract face in dst image
5. Resize both faces to the same size
(size of face that was detected in dst image)

- 5.1. Calculate center position of face in dst (big) image = **center_face**
- 5.2. Create white image with the same size as faces = **src_face_mask**

6. `seamlessclone = cv2.seamlessClone(src_face_img, dst_image, src_face_mask, center_face, cv2.MONOCHROME_TRANSFER)`



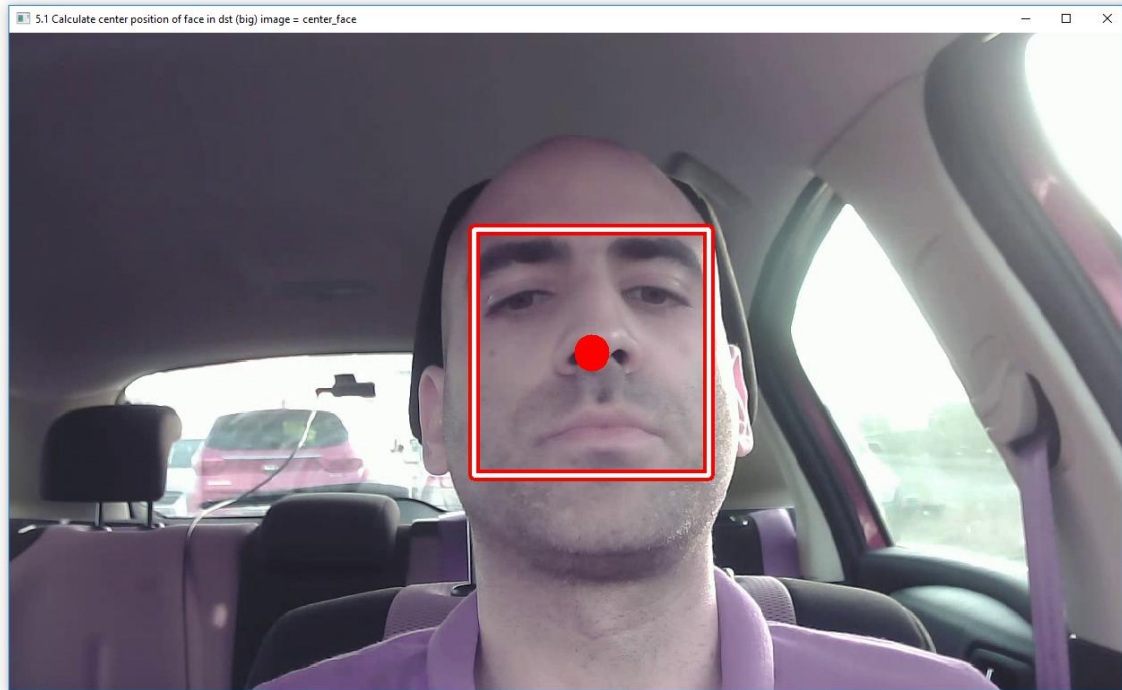
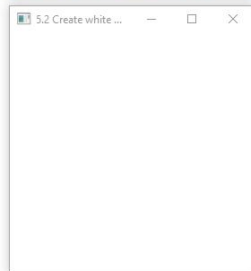
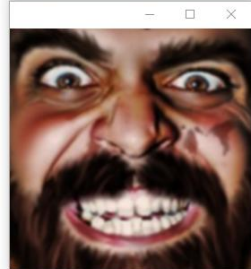
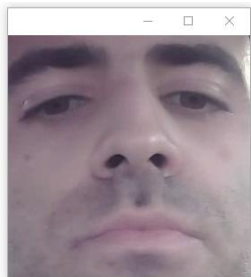
dst image

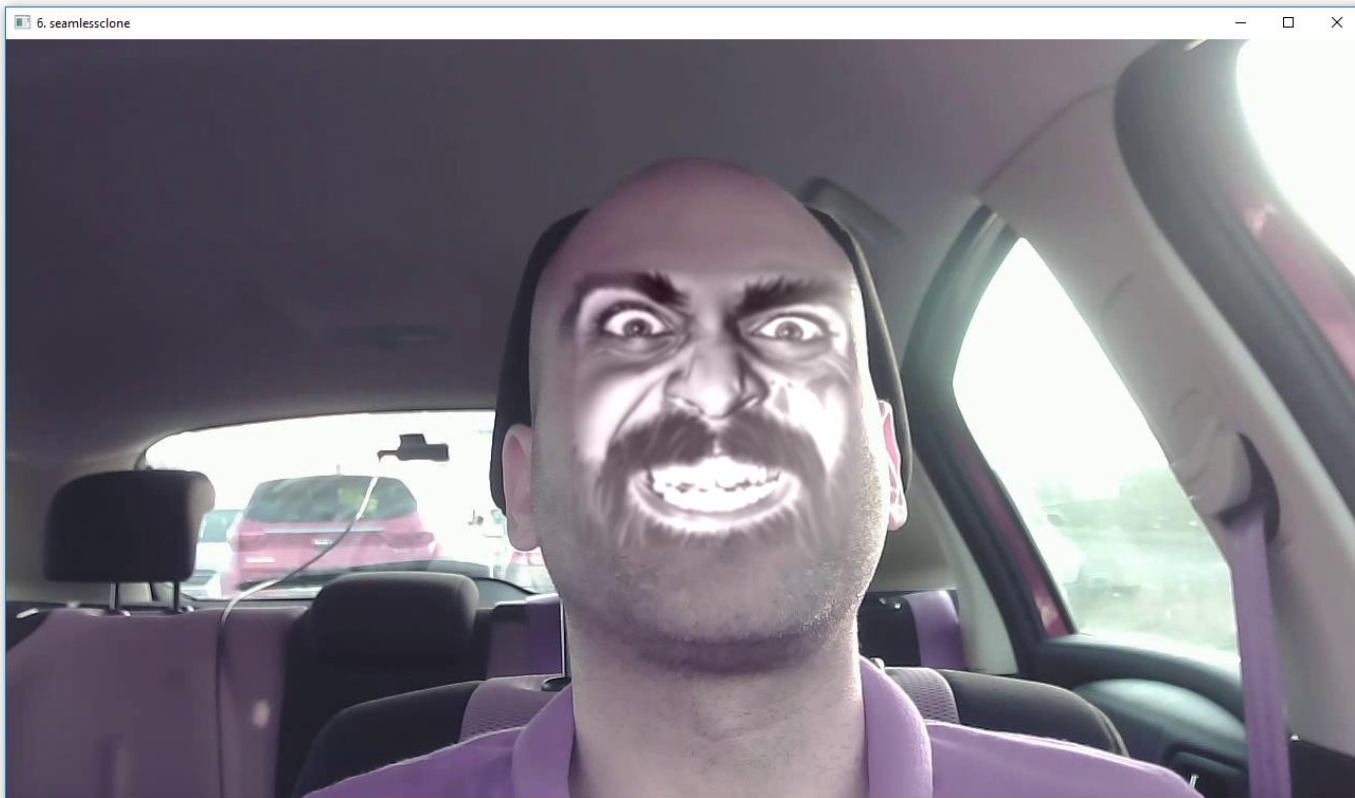


src image

5.1.
Calculate center position
of face in dst (big) image
= **center_face**

5.2.
Create white image with
the same size as faces
= **src_face_mask**





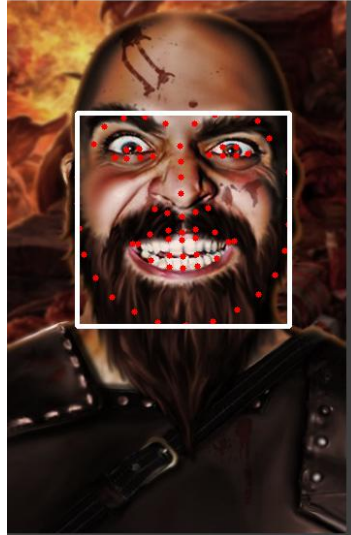
```
seamlessclone = cv2.seamlessClone(src_face_img, dst_image, src_face_mask, center_face, cv2.MONOCHROME_TRANSFER)
```


FACE SWAP - 3. VERSION

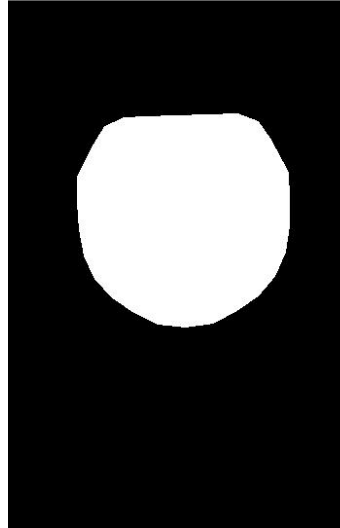
1. Find face in src image



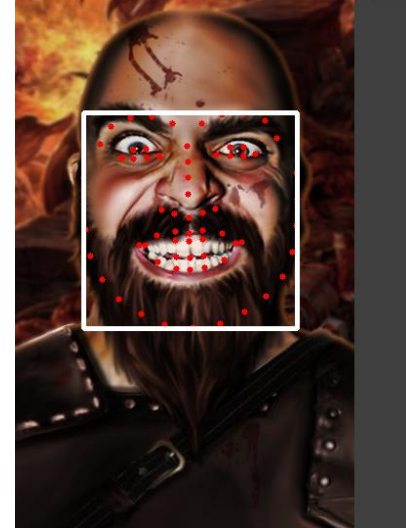
2. Find landmarks



3. Create convexhull face mask from landmarks cv2.convexHull, cv2.fillConvexPoly



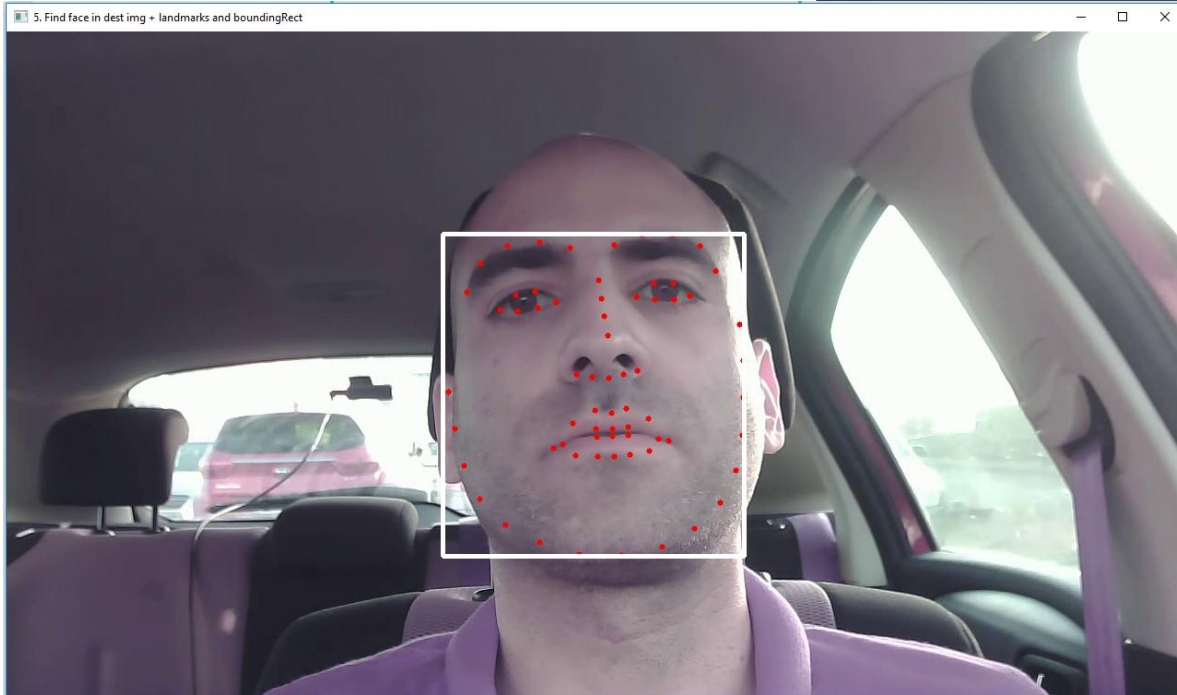
4. Compute width, height of face using landmarks and boundingRect



FACE SWAP - 3. VERSION

6. Calculate center of this face in dst (big) frame = center_face

5. Find face in dest img + landmarks and boundingRect



FACE SWAP - 3. VERSION

HINT:

Resize `src_frame` and
`face_mask` according to:
 $\text{dst_face_w}/\text{src_face_w}$
 $\text{dst_face_h}/\text{src_face_h}$

Use `seamlessclone` with
new `resize face_mask`
and `src_frame`

Use:
`cv2.MONOCHROME_TRANS
FER`
`cv2.NORMAL_CLONE`

Step - 8 seamlessclone



text

FACE SWAP - cv2.MONOCHROME_TRANSFER vs cv2.NORMAL_CLONE

