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# **aiocv Documentation**

***Release latest***

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## # AIOCV

aiocv Is A Python Library Used To Track Hands, Track Pose, Detect Face, Detect Contours (Shapes), Detect Cars, Detect Number Plate, Detect Smile, Detect Eyes, Control Volume Using Gesture And Create Face Mesh On Image/Video.

### ## Installation

Use the package manager [pip](<https://pypi.org/project/aiocv/>) to install aiocv.

```
`bash pip install aiocv`
```

```
## Usage ##### Hand Tracking `python import aiocv import cv2 img = cv2.imread("hands.png")`
# Make An Object hands = aiocv.HandTrack() # Use findHands() Method To Track Hands On
Image/Video hands.findHands(img,draw=True) cv2.imshow("Image",img) cv2.waitKey(0) `
##### Params For findHands() Method : `python findHands(self,img=None,draw=True)` ##### If
You Are Not Getting Desired Results, Consider Changing detectionConfidence = 1 and trackConfidence = 1
##### Output : ![Hand Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example4.png?raw=true)
##### Pose Detector `python import aiocv import cv2 img = cv2.imread("man.png")` # Make An
Object pose = aiocv.PoseDetector() # Use findPose() Method To Detect Pose On Image/
Video pose.findPose(img,draw=True) cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params
For findPose() Method : `python findPose(self,img=None,draw=True)` ##### If You Are Not Get-
ting Desired Results, Consider Changing detectionConfidence = 1 and trackConfidence = 1 ##### Output
: ![Pose Track Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example3.png?raw=true)
##### Face Detection `python import aiocv import cv2 img = cv2.imread("elon_musk.png")` # Make
An Object face = aiocv.FaceDetector() # Use findFace() Method To Detect Face On Image/
Video face.findFace(img,draw=True) cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params
For findFace() Method : `python findFace(self,img=None,draw=True)` ##### If You Are Not Get-
ting Desired Results, Consider Changing detectionConfidence = 1 and trackConfidence = 1 ##### Output : ![Face Detection Im-
age](https://github.com/N1nja0p/aiocv/blob/main/examples/example1.png?raw=true)
##### Face Mesh `python
import aiocv import cv2 img = cv2.imread("elon_musk.png")` # Make An Object mesh = aiocv.
FaceMesh() # Use findFaceMesh() Method To Detect Face And Draw Mesh On Image/Video mesh.
findFaceMesh(img,draw=True) cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params For find-
FaceMesh() Method : `python findFaceMesh(self,img=None,draw=True)` ##### If You Are Not Getting
Desired Results, Consider Changing detectionConfidence = 1 and trackConfidence = 1 ##### Output : ![Face Mesh
Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example2.png?raw=true)
##### Contour (Shape)
Detection `python import aiocv import cv2 img = cv2.imread("shapes.png")` # Make An Object
shape = aiocv.ContourDetector(img) # Use findContours() Method To Detect Shapes On Image/
Video shape.findContours(img,draw=True) cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Out-
put : ![Contour Detection Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example5.png?raw=true)
##### Car Detection `python import aiocv import cv2 img = cv2.imread("car.png")` # Make An
Object car = aiocv.CarDetector(img) # Use findCars() Method To Detect Cars On Image/
Video car.findCars() cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params For findCars()
Method : `python findCars(self,color=(255,0,0),thickness=2)` ##### Output : ![Car Detection Im-
age](https://github.com/N1nja0p/aiocv/blob/main/examples/example9.png?raw=true)
##### Number Plate Detection
`python import aiocv import cv2 img = cv2.imread("car.png")` # Make An Object car = aiocv.
NumberPlateDetector(img) # Use findNumberPlate() Method To Detect Number Plate On Image/
Video car.findNumberPlate() cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params For findNum-
berPlate() Method : `python findNumberPlate(self,color=(255,0,0),thickness=2)` ##### Output :
![Number Plate Detection Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example6.png?raw=true)
##### Smile Detection `python import aiocv import cv2 img = cv2.imread("person.png")` # Make
An Object smile = aiocv.SmileDetector(img) # Use findSmile() Method To Detect Smile
On Image/Video smile.findSmile() cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params
For findSmile() Method : `python findSmile(self,color=(255,0,0),thickness=2)` ##### Output :
![Smile Detection Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example7.png?raw=true)
##### Eyes Detection `python import aiocv import cv2 img = cv2.imread("person.png")` # Make An
Object eyes = aiocv.EyesDetector(img) # Use findEyes() Method To Detect Eyes On Image/
```

```
Video eyes.findEyes() cv2.imshow("Image",img) cv2.waitKey(0) ` ##### Params For findEyes()
Method : `python findEyes(self,color=(255,0,0),thickness=2) ` ##### Output : ![Eyes Detection
Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example8.png?raw=true) ##### Eyes Detection
`python import aiocv gvc=aiocv.GestureVolumeControl() gvc.controlVolume() ` ##### Params For
controlVolume() Method : `python controlVolume(self,color=(255,0,0),thickness=2) ` ##### Params
For GestureVolumeControl Class : `python gvc = aiocv.GestureVolumeControl(webcamIndex = 0) #
If You Want To Control From Other Camera, Set The webcamIndex Accordingly. ` ##### Output :
![Gesture Volume Control Image](https://github.com/N1nja0p/aiocv/blob/main/examples/example10.png?raw=true)
## Contributing Pull Requests Are Welcome. For Major Changes, Please Open An Issue First To Discuss What You
Would Like To Change.
```

Please Make Sure To Update Tests As Appropriate.

## License [MIT](https://github.com/N1nja0p/aiocv/blob/main/LICENCE.txt)