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"# 1. Getting Images"

]

},

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"# Import opencv\n",

"import cv2 \n",

"\n",

"# Import uuid\n",

"import uuid"

]

},

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"# Image capture\n",

"cap = cv2.VideoCapture(2)\n",

"width = int(cap.get(cv2.CAP\_PROP\_FRAME\_WIDTH))\n",

"height = int(cap.get(cv2.CAP\_PROP\_FRAME\_HEIGHT))"

]

},

{

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"while True: \n",

" ret, frame = cap.read()\n",

" imgname = './Images/No Mask/{}.jpg'.format(str(uuid.uuid1()))\n",

" cv2.imwrite(imgname, frame)\n",

" cv2.imshow('frame', frame)\n",

" \n",

" if cv2.waitKey(1) & 0xFF == ord('q'):\n",

" break"

]

},

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"cap.release()\n",

"cap.destroyAllWindows()"

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},

{

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"# 1.1 Training Model - Watson Studio"

]

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"# Done"

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"# 2. Scoring"

]

},

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"import json\n",

"from ibm\_watson import VisualRecognitionV4\n",

"from ibm\_watson.visual\_recognition\_v4 import FileWithMetadata, AnalyzeEnums\n",

"from ibm\_cloud\_sdk\_core.authenticators import IAMAuthenticator"

]

},

{

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"apikey = 'YOUR API KEY HERE'\n",

"url = 'YOUR URL HERE'\n",

"collection = 'YOUR COLLECTION HERE'"

]

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"authenticator = IAMAuthenticator(apikey)\n",

"service = VisualRecognitionV4('2018-03-19', authenticator=authenticator)\n",

"service.set\_service\_url(url)"

]

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"path = 'PATH TO YOUR IMAGE'"

]

},

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"with open(path, 'rb') as mask\_img:\n",

" analyze\_images = service.analyze(collection\_ids=[collection], \n",

" features=[AnalyzeEnums.Features.OBJECTS.value], \n",

" images\_file=[FileWithMetadata(mask\_img)]).get\_result()"

]

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"analyze\_images"

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"# 3. Visualise"

]

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"obj = analyze\_images['images'][0]['objects']['collections'][0]['objects'][0]['object']\n",

"coords = analyze\_images['images'][0]['objects']['collections'][0]['objects'][0]['location']"

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"coords"

]

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"from matplotlib import pyplot as plt"

]

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"img = cv2.imread(path)"

]

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"img = cv2.cvtColor(img, cv2.COLOR\_BGR2RGB)"

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"font = cv2.FONT\_HERSHEY\_SIMPLEX\n",

"img = cv2.putText(img, text=obj, org=(coords['left']+coords['width'], coords['top']+coords['height']), fontFace=font, fontScale=2, color=(0,255,0), thickness=5, lineType=cv2.LINE\_AA)"

]

},

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"plt.imshow(img)"

]

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"obj"

]

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