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"metadata": {

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"source": [

"# IBM Project Name: Real-Time Communication System Powered by AI for Specially Abled \n",

"# TEAM ID: PNT2022TMID36138 \n",

"# TEAM Member:Karunkaran R\n",

"\n",

"# Importing req. lib."

]

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"import cv2\n",

"import numpy as np\n",

"import matplotlib.pyplot as plt"

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"# Image processiong"

]

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"source": [

"# Create a image\n",

"\n",

"img1 = np.zeros((400,600,3),np.uint8)\n",

"plt.imshow(img1)"

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"# Drawing Functions"

]

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"source": [

"# Draw a circle\n",

"\n",

"circle = cv2.circle(img1, (300,200), 50, (255,0,0), -1) # (0,0,0)--->(R,G,B)\n",

"plt.imshow(img1)"

]

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"output\_type": "display\_data"

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"source": [

"# Drawing rectangle\n",

"\n",

"rectangle = cv2.rectangle(img1,(200,100),(400,300),(0,255,0),6)\n",

"plt.imshow(img1)"

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"output\_type": "display\_data"

}

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"source": [

"# Drawing line\n",

"\n",

"line1 = cv2.line(img1,(200,100),(400,300),(0,0,255),4)\n",

"line2 = cv2.line(img1,(200,300),(400,100),(0,0,255),4)\n",

"plt.imshow(img1)"

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]

},

"metadata": {

"needs\_background": "light"

},

"output\_type": "display\_data"

}

],

"source": [

"circle = cv2.circle(img1, (300,200), 50, (255,255,0), -1) # (0,0,0)--->(R,G,B)\n",

"plt.imshow(img1)"

]

},

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"metadata": {

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"output\_type": "display\_data"

}

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"source": [

"# Text on image\n",

"\n",

"text = cv2.putText(img1, 'openCV', (200,50), cv2.FONT\_HERSHEY\_SIMPLEX, 2, (255,255,255),5)\n",

"plt.imshow(img1)"

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"metadata": {

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"# Reading the image\n",

"\n",

"img = cv2.imread('/content/boy.jpg',1)\n",

"plt.imshow(img)"

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},

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"outputs": [],

"source": [

"# Convert BGR to RGB\n",

"\n",

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

"plt.imshow(img\_rgb)"

]

},

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"metadata": {

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"# Convert BGR to Gray\n",

"\n",

"img\_gray = cv2.cvtColor(img, cv2.COLOR\_BGR2GRAY)\n",

"plt.imshow(img\_gray)"

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"# Finding shape\n",

"\n",

"img\_rgb.shape"

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"# Resize the image\n",

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"resize = cv2.resize(img\_rgb,(500,1000))\n",

"print(resize.shape)\n",

"plt.imshow(resize)"

]

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"source": [

"# Image crop\n",

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"crop = resize[130:370,150:300]\n",

"plt.imshow(crop)"

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"cell\_type": "code",

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"# Edge Detection\n",

"\n",

"edge = cv2.Canny(img\_rgb,100,200)\n",

"plt.imshow(edge)"

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"# Blur image\n",

"\n",

"r = resize[130:370,150:300]\n",

"blur = cv2.GaussianBlur(r,(13,13),cv2.BORDER\_DEFAULT)\n",

"plt.imshow(resize)\n",

"plt.imshow(blur)"

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