{

"nbformat": 4,

"nbformat\_minor": 0,

"metadata": {

"colab": {

"provenance": []

},

"kernelspec": {

"name": "python3",

"display\_name": "Python 3"

},

"language\_info": {

"name": "python"

}

},

"cells": [

{

"cell\_type": "markdown",

"source": [

"##TEST THE MODEL"

],

"metadata": {

"id": "TOEya1fQlR48"

}

},

{

"cell\_type": "code",

"source": [

"!unzip '/content/drive/MyDrive/IBMPROJECT/conversation engine for deaf and dumb.zip'"

],

"metadata": {

"id": "snq--xgskohc"

},

"execution\_count": null,

"outputs": []

},

{

"cell\_type": "code",

"execution\_count": 1,

"metadata": {

"id": "SjMZT0YFj\_-c"

},

"outputs": [],

"source": [

"from tensorflow.keras.models import load\_model\n",

"from tensorflow.keras.preprocessing import image\n",

"import numpy as np\n",

"import cv2"

]

},

{

"cell\_type": "code",

"source": [

"model = load\_model('/content/Real\_time.h5')"

],

"metadata": {

"id": "-nDN6iyWkd9L"

},

"execution\_count": 8,

"outputs": []

},

{

"cell\_type": "code",

"source": [

"img = image.load\_img('/content/Dataset/test\_set/H/107.png',target\_size = (100,100))\n",

"img"

],

"metadata": {

"colab": {

"base\_uri": "https://localhost:8080/",

"height": 117

},

"id": "UZtwzfSvkGyu",

"outputId": "9b75f8f7-1e2a-42ad-e56b-7bff672fef6d"

},

"execution\_count": 9,

"outputs": [

{

"output\_type": "execute\_result",

"data": {

"text/plain": [

"<PIL.Image.Image image mode=RGB size=100x100 at 0x7F2D37E9B190>"

],

"image/png": "\n"

},

"metadata": {},

"execution\_count": 9

}

]

},

{

"cell\_type": "code",

"source": [

"from skimage.transform import resize\n",

"def detect(frame):\n",

" img=image.img\_to\_array(frame)\n",

" img = resize(img,(64,64,1))\n",

" img = np.expand\_dims(img,axis=0)\n",

" pred=np.argmax(model.predict(img))\n",

" op=['A','B','C','D','E','F','G','H','I']\n",

" print(\"THE PREDICTED LETTER IS \",op[pred])"

],

"metadata": {

"id": "Hl13lzG6kNv9"

},

"execution\_count": 10,

"outputs": []

},

{

"cell\_type": "code",

"source": [

"img=image.load\_img(\"/content/Dataset/test\_set/H/107.png\")\n",

"detect(img)"

],

"metadata": {

"colab": {

"base\_uri": "https://localhost:8080/"

},

"id": "xzUN7xCgkOj4",

"outputId": "1fa5326b-5caa-49c2-b905-7720a634e6a9"

},

"execution\_count": 11,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"1/1 [==============================] - 0s 412ms/step\n",

"THE PREDICTED LETTER IS H\n"

]

}

]

},

{

"cell\_type": "code",

"source": [

"img = image.load\_img('/content/Dataset/test\_set/A/110.png')\n",

"pred=detect(img)"

],

"metadata": {

"colab": {

"base\_uri": "https://localhost:8080/"

},

"id": "VvqtPn8GkR3M",

"outputId": "f2df7b44-699e-44ef-df3c-d16cee546590"

},

"execution\_count": 12,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"1/1 [==============================] - 0s 23ms/step\n",

"THE PREDICTED LETTER IS A\n"

]

}

]

},

{

"cell\_type": "code",

"source": [

"img=image.load\_img('/content/Dataset/test\_set/F/108.png')\n",

"detect(img)"

],

"metadata": {

"colab": {

"base\_uri": "https://localhost:8080/"

},

"id": "GR9O89jXkVuf",

"outputId": "7f05feeb-21a0-4591-c3f0-180b2039961e"

},

"execution\_count": 14,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"1/1 [==============================] - 0s 25ms/step\n",

"THE PREDICTED LETTER IS F\n"

]

}

]

}

]

}