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   "display_name": "Python 3"
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  "language_info": {
   "name": "python"
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    "##TEST THE MODEL"
   ],
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  },
  {
   "cell_type": "code",
```

```
  "source": [
    "!unzip '/content/drive/MyDrive/IBMPROJECT/conversation engine for deaf and dumb.zip'"
  ],
  "metadata": {
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  },
  "execution_count": null,
  "outputs": []
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  "metadata": {
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  },
  "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"
 },
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 "outputs": []
},
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  "img = image.load_img('/content/Dataset/test_set/H/107.png',target_size = (100,100))\n",
  "img"
 ],
 "metadata": {
  "colab": {
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   "height": 117
  },
  "id": "UZtwzfSvkGyu",
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 },
 "execution_count": 9,
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    "text/plain": [
```

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

         ],

         "image/png":
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h2u/T5lw2wlsPDQ8SQhc2JYWJ7e5uIFotF6StvYLMSqf+AcXR0REQvLy+5F0QMFfwDzs0UMA7yqYwAAA
AASUVORK5CYII=\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": {
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     "base_uri": "https://localhost:8080/"
    },
    "id": "xzUN7xCgkOj4",
    "outputId": "1fa5326b-5caa-49c2-b905-7720a634e6a9"
   },
   "execution_count": 11,
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    {
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     "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/"
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   "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"
    ]
   }
```

```
    ]
  }
 ]
}
```