

```

{
  "cells": [
    {
      "cell_type": "markdown",
      "metadata": {
        "id": "TOEyalfQlR48"
      },
      "source": [
        "Team Id          PNT2022TMID34274\n",
        "Team Leader      PRINCY S",
        "\n",
        "\n",
        ""
        ##TEST THE MODEL"
      ]
    },
    {
      "cell_type": "code",
      "execution_count": null,
      "metadata": {
        "id": "snq--xgskohc"
      },
      "outputs": [],
      "source": [
        "!unzip '/content/drive/MyDrive/IBMPROJECT/conversation engine
for deaf and dumb.zip'"
      ]
    },
    {
      "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",
      "execution_count": 8,
      "metadata": {
        "id": "-nDN6iyWkd9L"
      },
      "outputs": [],
      "source": [
        "model = load_model('/content/Real_time.h5')"
      ]
    },
    {
      "cell_type": "code",
      "execution_count": 9,
      "metadata": {
        "colab": {
          "base_uri": "https://localhost:8080/"
        }
      }
    }
  ]
}

```

```

        "height": 117
    },
    "id": "UZtwzfSvkGyu",
    "outputId": "9b75f8f7-1e2a-42ad-e56b-7bff672fef6d"
},
"outputs": [
    {
        "data": {
            "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAGQAAABkCAIAAAD/gAIDAAAC4U1EQVR4nO3cvUrzUBgH8Oe8
vEOK0EJw8AN0k4YM2UQyZXTo4Ngr8BKKl1AnL8ALaKFD6SDBNSCiizrpFXTPlskhmHc4r7FEa
nrydZ7U/2+KtT15eHj+8aRvIQAAAAAAAAAAAAAAAAAAAAAAAAA4LcTmc+4uLiQB7e3t0T09P
RUbUVrSwpbNhwOqzvymY5jvP8/FzdiatzfX1NROfn56Wv/Kf0FX+jfr8fN9n15WXpPcFkKdj
YZg0GA8MwDMMocc2/qa+73e7VlRURnZ6elniazbCxl1WF9NYhjmMtdVTn/f2diFqtVvGlvizL
/hApviI38sr1+vpafCnEUMFXDDdyrJYJkX1v17FCaq2Pj4+CK7L19vZGRJZ15V4BMVSQnszj4
+OHhwctpdSjSBgxWQrSzXp8fBRCCCHOzs7CMAzDUETz1Ynj2Pd93/dzvDZ9u5OYzWadTmf5Eb
lV2dvba7fbOc7Ex9bWVr4XIoYKcm097u/v5cHJyUkZxdRN9WJfdJ/2M3lp2N3ddRyn0hPlc3N
zQ0S9Xm/N5yOGCqqdr09Go1Fy7LruwcfBzQV8t34Y627WMj53o/JTtcy37RFDBXqaxe29M8/z
PM/LfJqeGLLqVMOPlzDEUIGeZgVBEASB1lNn6vf7q76FyWoI13W1fLKfaVXBOvdZxPtKblmWf
Cc6gRgqQLNWmkwmqUcQw2zJzguTpUBzs0zTNE1Tbw2ZdnZ25IHmGEr8wyiTIBgqYDFZ1IThIk
yWEi7NiQIoiiLdVWTgEkOJeRi5TFYj8GpW8d83qxTT4njmkddkMcd0siRu88V6soQQ4/F4PB7
rLuQ/1s3ihnUME0zy2IzJ2t/f110CUVOaxUQzmjWfz8Un27Zt255Op/WX0YxmQZnu7u40fvja
MI7j1NASxFBBM/ZZ6+h2u/T5lw2wlsPDQ8SQhc2JYWJ7e5uIFotF6StvYLMSqf+AcXR0REQvL
y+5F0QMfwdDs0UMA7yqYwAAAAASUVORK5CYII=",
            "text/plain": [
                "<PIL.Image.Image image mode=RGB size=100x100 at
0x7F2D37E9B190>"
            ]
        },
        "execution_count": 9,
        "metadata": {},
        "output_type": "execute_result"
    }
],
"source": [
    "img =
image.load_img('/content/Dataset/test_set/H/107.png',target_size =
(100,100))\n",
    "img"
]
},
{
    "cell_type": "code",
    "execution_count": 10,
    "metadata": {
        "id": "Hl131zG6kNv9"
    },
    "outputs": [],
    "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])"
    ]
}

```

```

},
{
  "cell_type": "code",
  "execution_count": 11,
  "metadata": {
    "colab": {
      "base_uri": "https://localhost:8080/"
    },
    "id": "xzUN7xCgkOj4",
    "outputId": "1fa5326b-5caa-49c2-b905-7720a634e6a9"
  },
  "outputs": [
    {
      "name": "stdout",
      "output_type": "stream",
      "text": [
        "1/1 [=====] - 0s 412ms/step\n",
        "THE PREDICTED LETTER IS  H\n"
      ]
    }
  ],
  "source": [
    "img=image.load_img(\"/content/Dataset/test_set/H/107.png\")\n",
    "detect(img)"
  ]
},
{
  "cell_type": "code",
  "execution_count": 12,
  "metadata": {
    "colab": {
      "base_uri": "https://localhost:8080/"
    },
    "id": "VvqtPn8GkR3M",
    "outputId": "f2df7b44-699e-44ef-df3c-d16cee546590"
  },
  "outputs": [
    {
      "name": "stdout",
      "output_type": "stream",
      "text": [
        "1/1 [=====] - 0s 23ms/step\n",
        "THE PREDICTED LETTER IS  A\n"
      ]
    }
  ],
  "source": [
    "img = image.load_img('/content/Dataset/test_set/A/110.png')\n",
    "pred=detect(img)"
  ]
},
{
  "cell_type": "code",
  "execution_count": 14,
  "metadata": {
    "colab": {
      "base_uri": "https://localhost:8080/"
    },

```

```

    "id": "GR9089jXkVuf",
    "outputId": "7f05feeb-21a0-4591-c3f0-180b2039961e"
  },
  "outputs": [
    {
      "name": "stdout",
      "output_type": "stream",
      "text": [
        "1/1 [=====] - 0s 25ms/step\n",
        "THE PREDICTED LETTER IS  F\n"
      ]
    }
  ],
  "source": [
    "img=image.load_img('/content/Dataset/test_set/F/108.png')\n",
    "detect(img)"
  ]
}
},
"metadata": {
  "colab": {
    "provenance": []
  },
  "kernelspec": {
    "display_name": "Python 3",
    "name": "python3"
  },
  "language_info": {
    "name": "python"
  }
},
"nbformat": 4,
"nbformat_minor": 0
}

```