

PNT2022TMID50371

```
{
  "cells": [
    {
      "cell_type": "code",
      "execution_count": 1,
      "id": "c646b646",
      "metadata": {},
      "outputs": [],
      "source": [
        "from keras.preprocessing.image import ImageDataGenerator\n",
        "\n",
        "train_datagen=ImageDataGenerator(rescale=1./255,shear_range=0.2,zoom_range=0.2,horizontal_flip=True)\n",
        "\n",
        "test_datagen=ImageDataGenerator(rescale=1./255)"
      ]
    },
    {
      "cell_type": "code",
      "execution_count": 2,
      "id": "2eabe5f4",
      "metadata": {},
      "outputs": [
        {
          "name": "stdout",
```

```

"output_type": "stream",

"text": [

    "Found 15750 images belonging to 9 classes.\n"

]

},

],

"source": [

    "x_train = train_datagen.flow_from_directory(r'C:\\Users\\schit\\Downloads\\conversation engine
for deaf and dumb
(1)\\Dataset\\training_set',target_size=(64,64),batch_size=300,class_mode='categorical',color_mode=\
"grayscale")"

]

},

{

    "cell_type": "code",

    "execution_count": 3,

    "id": "666e506d",

    "metadata": {},

    "outputs": [

        {

            "name": "stdout",

            "output_type": "stream",

            "text": [

                "Found 2250 images belonging to 9 classes.\n"

            ]

        }

    ],


```

```

"source": [
    "x_test = test_datagen.flow_from_directory(r'C:\\Users\\schit\\Downloads\\conversation engine for deaf and dumb (1)\\Dataset\\test_set',target_size=(64,64),batch_size=300,class_mode='categorical',color_mode='grayscale\\")"
]
},
{
    "cell_type": "code",
    "execution_count": 4,
    "id": "e736cea3",
    "metadata": {},
    "outputs": [],
    "source": [
        "from keras.models import Sequential\\n",
        "from keras.layers import Dense\\n",
        "from keras.layers import Convolution2D\\n",
        "from keras.layers import MaxPooling2D\\n",
        "from keras.layers import Dropout\\n",
        "from keras.layers import Flatten"
    ]
},
{
    "cell_type": "code",
    "execution_count": 5,
    "id": "82ab60cb",
    "metadata": {},

```

```
"outputs": [],  
"source": [  
  "model = Sequential()" ]  
,  
{  
  "cell_type": "code",  
  "execution_count": 6,  
  "id": "809fad36",  
  "metadata": {},  
  "outputs": [],  
  "source": [  
    "model.add(Convolution2D(32,(3,3),input_shape=(64,64,1), activation='relu'))" ]  
  },  
{  
  "cell_type": "code",  
  "execution_count": 7,  
  "id": "5c19f950",  
  "metadata": {},  
  "outputs": [],  
  "source": [  
    "model.add(MaxPooling2D(pool_size=(2,2)))" ]  
  },
```

```
{
  "cell_type": "code",
  "execution_count": 8,
  "id": "361720c6",
  "metadata": {},
  "outputs": [],
  "source": [
    "model.add(Flatten())"
  ]
},
{
  "cell_type": "code",
  "execution_count": 9,
  "id": "d29a6f32",
  "metadata": {},
  "outputs": [],
  "source": [
    "model.add(Dense(units=512, activation = 'relu'))"
  ]
},
{
  "cell_type": "code",
  "execution_count": 10,
  "id": "934c38c9",
  "metadata": {},
```

```
"outputs": [],
"source": [
  "model.add(Dense(units=9, activation = 'softmax'))"
],
{
  "cell_type": "code",
  "execution_count": null,
  "id": "1869727c",
  "metadata": {},
  "outputs": [],
  "source": []
},
{
  "metadata": {
    "kernel_spec": {
      "display_name": "Python 3 (ipykernel)",
      "language": "python",
      "name": "python3"
    },
    "language_info": {
      "codemirror_mode": {
        "name": "ipython",
        "version": 3
      },

```

```
"file_extension": ".py",  
"mimetype": "text/x-python",  
"name": "python",  
"nbconvert_exporter": "python",  
"pygments_lexer": "ipython3",  
"version": "3.9.13"  
  
}  
  
,  
  
"nbformat": 4,  
"nbformat_minor": 5  
  
}
```