PNT2022TMID50371

```json
{
 "cells": [
  {
   "cell_type": "code",
   "execution_count": 1,
   "id": "2c47ea9c",
   "metadata": {},
   "outputs": [],
   "source": [
    "from keras.preprocessing.image import ImageDataGenerator\n",

"train_datagen=ImageDataGenerator(rescale=1./255,shear_range=0.2,zoom_range=0.2,horizontal_flip=
True)\n",
    "test_datagen=ImageDataGenerator(rescale=1./255)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 2,
   "id": "520b746c",
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
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      "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": "fc2860a5",

    "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": "79ed5d12",

  "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": "157e04e1",

  "metadata": {},
```

```json
 "outputs": [],

 "source": [

  "model = Sequential()"

 ]

},

{

 "cell_type": "code",

 "execution_count": 6,

 "id": "89a439b4",

 "metadata": {},

 "outputs": [],

 "source": [

  "model.add(Convolution2D(32,(3,3),input_shape=(64,64,1), activation='relu'))"

 ]

},

{

 "cell_type": "code",

 "execution_count": 7,

 "id": "f793c4b1",

 "metadata": {},

 "outputs": [],

 "source": [

  "model.add(MaxPooling2D(pool_size=(2,2)))"

 ]

},
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```json
{
 "cell_type": "code",
 "execution_count": 8,
 "id": "5d759d0d",
 "metadata": {},
 "outputs": [],
 "source": [
  "model.add(Flatten())"
 ]
},
{
 "cell_type": "code",
 "execution_count": 9,
 "id": "ab0db88a",
 "metadata": {},
 "outputs": [],
 "source": [
  "model.add(Dense(units=512, activation = 'relu'))"
 ]
},
{
 "cell_type": "code",
 "execution_count": 10,
 "id": "8e922a3e",
 "metadata": {},
```

```json
  "outputs": [],

  "source": [

   "model.add(Dense(units=9,  activation = 'softmax'))"

  ]

 },

 {

  "cell_type": "code",

  "execution_count": 12,

  "id": "4245577f",

  "metadata": {},

  "outputs": [],

  "source": [

   "model.compile(loss='categorical_crossentropy', optimizer = 'adam', metrics=['accuarcy'])"

  ]

 },

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  "execution_count": null,

  "id": "5552528b",

  "metadata": {},

  "outputs": [],

  "source": []

 }

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"metadata": {
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  "name": "python3"
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   "name": "ipython",
   "version": 3
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  "mimetype": "text/x-python",
  "name": "python",
  "nbconvert_exporter": "python",
  "pygments_lexer": "ipython3",
  "version": "3.9.13"
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"nbformat": 4,
"nbformat_minor": 5
}
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