

The purpose of the project is to make a model which identifies the name of the landmark in given images. In the project, I used matplotlib to visualize the data, numpy to create a container for images, and tensorflow to create the model. From tensorflow, I imported keras and used it to create the model. The image dataset used for the model is

“Google-Landmarks Dataset” from Kaggle.com.

After I imported the libraries, I set the batch size, image height, and image weight to 32, 180, and 180 respectively. Then, I classified 80% of the image to the training dataset, and 20% of the image to the validation dataset. To create the model, I normalized the images in the training dataset and used a sequential model from keras to construct the model. After I trained the model for 10 epochs, I found out that the accuracy of the model was close to 100%, but the validation accuracy was only about 80%.

Therefore, I used data augmentation to modify the images to fix the overfitting of the model. In the data augmentation process, I used RandomFlip, RandomRotation, RandomZoom, and RandomContrast methods from keras. Also, I added two more Conv2D and MaxPooling2D to upgrade the model. After I trained the model for 80 epochs, I found out that the accuracy and the validation accuracy followed similar trends throughout the training, and they approached to about 85%.