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I have followed steps:

1. Loading training, validation and test dataset
2. Preparing train_loader , val_loader & test_loader
3. Creating a train_model function that trains the model and this function returns training accuracy and training loss
4. Creating validate_model function test the model and this function returns test accuracy and test loss
5. Define our model **Eurosat_CNN**
6. Model fitting step -> Here we fit our model using train_model and validate_model function

Hyperparameters used in **Eurosat_CNN** model

Hyperparameter	Value
Optimizer	Adam
Learning rate	0.001
Weight decay	0
Early stopping patience	5
epochs	15
Dropout rate	0.5

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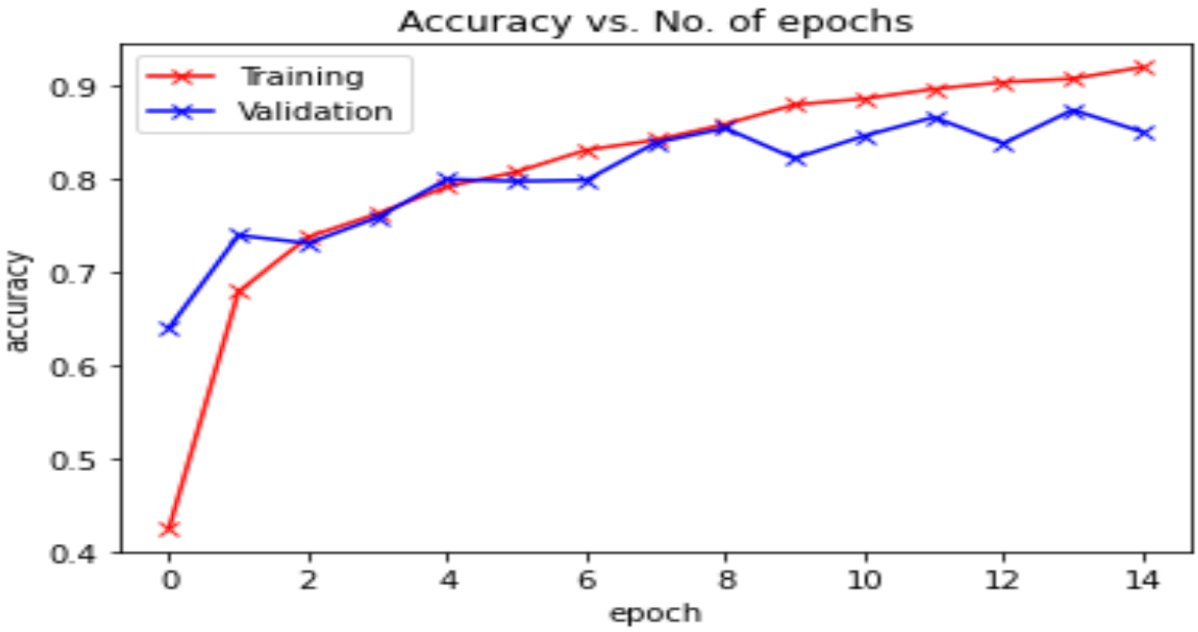
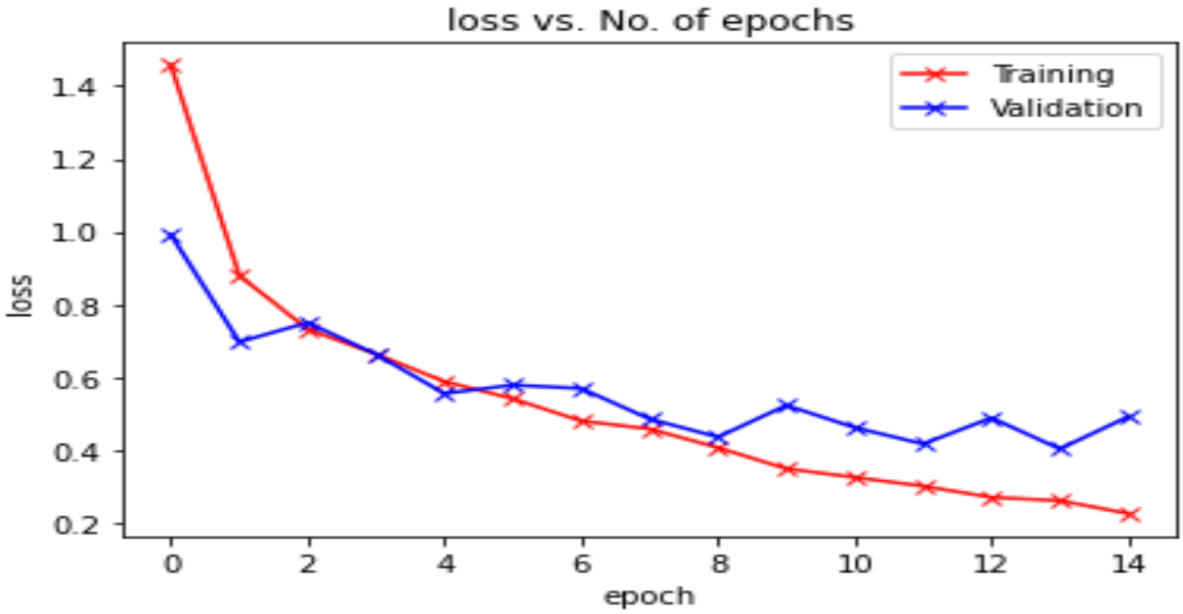
Accuracy vs No of epochs plot:



Loss vs No of epochs plot:



Accuracy of test data is 0.8637037037037038
Accuracy of validation data is 0.8596866096866097

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A Confusion matrix is an N x N matrix used for evaluating the performance of a classification model, where N is the number of target classes. The matrix compares the actual target values with those predicted by the machine learning model. This gives us a holistic view of how well our classification model is performing and what kinds of errors it is making.