Tasks Accomplished

Used transfer learning for large image classification, going through the following steps:

1. Took 100 images per class with at least 3 classes using my phone/camera. Display 5 examples from each class.
2. Split the images into a training set, a validation set, and a test set.
3. Build the input pipeline, including the appropriate preprocessing operations, and added data augmentation.
4. Fine-tuned a pretrained Xception model on this dataset (the one I created in part 3). Report classification accuracy and gave a few examples of correct/incorrect classification (showed a few images that were correctly/incorrectly classified).
5. Trained a deep neural network from scratch (without pretraining) that contains convolutional layers on this dataset (the one you created in part 3). Report classification accuracy and gave a few examples of correct/incorrect classification (showed a few images that were correctly/incorrectly classified). Note: The objective of this question is to illustrate that training deep networks from scratch requires a lot of data so it is ok if my classification accuracy is low.

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References

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