**Questions to Answer regarding Uploaded Image Classification:**

Once the program stops running and the results files appear in the *workspace*, open and review each of the three to answer the following questions:

Results:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Architecture** | **Dog\_01.jpg breed classification** | **Dog\_02.jpg breed classification** | **Frog\_01.jpg not dog classification** | **Coffee\_mug.jpg not dog classification** |
| **Resnet** | Classification correct. Breed - Beagle correctly classified | Classification correct. Breed - Beagle correctly classified | Yes, correctly classified as not a dog and classified as a "tree frog, tree-frog" | Yes, correctly classified as not a dog and classified as a "coffee mug" |
| **Alexnet** | Classification not correct. Breed - Beagle but was classified as english foxhound | Classification not correct. Breed - Beagle but was classified as english foxhound | Yes, correctly classified as not a dog and classified as a "tree frog, tree-frog" | Yes, correctly classified as not a dog and classified as a "coffee mug" |
| **VGG** | Classification not correct. Breed - Beagle but was classified as english foxhound | Classification not correct. Breed - Beagle but was classified as english foxhound | Yes, correctly classified as not a dog and classified as a "tree frog, tree-frog" | Yes, correctly classified as not a dog and classified as a "coffee mug" |

1. Did the three model architectures classify the breed of dog in *Dog\_01.jpg* to be the same breed? If not, report the differences in the classifications.

No all architectures did not classify correctly. Only Resnet correctly classified the breed as “Beagle”. Alexnet and VGG classified the images as “English foxhound”. However, I checked images of beagles and english foxhounds and they look very similar. So VGG and Alexnet did not do a very bad job either.

1. Did each of the three model architectures classify the breed of dog in *Dog\_01.jpg* to be the same breed of dog as that model architecture classified *Dog\_02.jpg*? If not, report the differences in the classifications.

Yes, all three architecture matched the breeds of the dogs for both images.

1. Did the three model architectures correctly classify *Animal\_Name\_01.jpg*and *Object\_Name\_01.jpg*to **not** be dogs? If not, report the misclassifications.

Yes, all architectures correctly classified the non-animal images as “not dogs”.

**4.**  Based upon your answers for questions **1.** - **3.** above, select the model architecture that you feel did the ***best*** at classifying the four *uploaded images*. Describe *why* you selected that model architecture as the ***best*** on uploaded image classification.

According to this result, the best performing architecture was Resnet because the breed of the dog and the non-dog and non-animal images were classified correctly.

However, it is truly amazing to see that these architectures can classify the images correctly. All three were mostly correct. However, Resnet was the best in this test.