Answers for evaluation questions

1. I used same dataset which is recommended by link but when I research on this theme I have found one work. In this work, He used the same data but clipping out the exact part of thyroid nodules represented. I implemented with this data.

2. I uploaded my work on github, here it is: https://github.com/Abdulaziz123/assigment-image-classification/tree/e01143c31d925f9f8d99976eb3b289d6f165f738

3. According to applying machine learning models the results were different. I used only three models that InceptionV3 with Accuracy: 80% and ResNet50V2 with Accuracy:72%, MobileNetV2 with Accuracy: 75%. But of course it depends on how model architecture structured, techniques that used and parameters. To get better result I used some techniques such as BatchNormalization, Dropout, in only several cases because of my dense time and training on only CPU, no GPU. Of course to improve the results, have to do more explorations, implementations in many cases.

4. My constraints for a good result in this question that I think I have to train more epochs. I have only set 50 epoch for training because of I was using CPU, it took more time, more epochs require GPU device. I would like to apply more complex and deep models such as VGG19, ResNet152V2 but it requires GPU faster train otherwise it took huge time consumption.

5. I have faced when I did my research in intrusion detection system classification. According to my research experience, it depends on the data balance that means if the benign and malignant are imbalanced, not equal, it affect to results. However balanced data improve the results.