Dataset link ((https://www.kaggle.com/ahmedhamada0/brain-tumor-detection)

Dataset=3000 // train=2400,test=600

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| **Table 1. Brain tumor systems accuracy for dataset name without data augmentation** | | | | |
|  | **Models** | | **Training accuracy** | **Validation Accuracy** |
|  | [**EfficientNetB0**](https://keras.io/api/applications/efficientnet/#efficientnetb0-function) | | 0.5171 | 0.4950 |
|  | [**EfficientNetB1**](https://keras.io/api/applications/efficientnet/#efficientnetb1-function) | | 0.5246 | 0.4867 |
|  | [**EfficientNetB2**](https://keras.io/api/applications/efficientnet/#efficientnetb2-function) | | 0.4918 | 0.6267 |
|  | [**EfficientNetB6**](https://keras.io/api/applications/efficientnet/#efficientnetb6-function) | | 0.5296 | 0.5800 |
|  | [**EfficientNetB7**](https://keras.io/api/applications/efficientnet/#efficientnetb7-function) | | 0.5063 | 0.4917 |
|  | [**ResNet50V2**](https://keras.io/api/applications/resnet/#resnet50v2-function) | | 1.0000 | 0.9917 |
|  | [**ResNet101V2**](https://keras.io/api/applications/resnet/#resnet101v2-function) | | 1.0000 | 0.9867 |
|  | [**ResNet152V2**](https://keras.io/api/applications/resnet/#resnet152v2-function) | | 0.9970 | 0.9850 |
|  | [**VGG16**](https://keras.io/api/applications/vgg/#vgg16-function) | | 0.9986 | 0.9900 |
|  | [**VGG19**](https://keras.io/api/applications/vgg/#vgg19-function) | | 0.9881 | 0.9900 |
|  | **GoogleNet** | | 0.9984 | 0.9867 |
|  | [**InceptionV3**](https://keras.io/api/applications/inceptionv3) | | 1.0000 | 0.9867 |
|  | [**InceptionResNetV2**](https://keras.io/api/applications/inceptionresnetv2) | | 0.9993 | 0.9900 |
|  | [**DenseNet121**](https://keras.io/api/applications/densenet/#densenet121-function) | | 0.9992 | 0.9800 |
|  | [**DenseNet169**](https://keras.io/api/applications/densenet/#densenet169-function) | | 1.0000 | 0.9900 |
|  | [**DenseNet201**](https://keras.io/api/applications/densenet/#densenet201-function) | | 1.0000 | 0.9900 |
|  | [**Mobile Net**](https://keras.io/api/applications/mobilenet) | | 1.0000 | 0.9900 |
|  | [**MobileNetV2**](https://keras.io/api/applications/mobilenet/#mobilenetv2-function) | | 1.0000 | 0.9917 |
|  | **my model** | 1.0000 | | 0.9883 |

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|  | **Models** | **precision** | **recall** | **f1-score** |
| 1 | [**EfficientNetB0**](https://keras.io/api/applications/efficientnet/#efficientnetb0-function) | 0. 0.49  1. 0.53 | 0. 0.97  1. 0.03 | 0. 0.66  1. 0.06 |
| 2 | [**EfficientNetB1**](https://keras.io/api/applications/efficientnet/#efficientnetb1-function) | 0. 0.49  1. 0.00 | 0. 0.99  1. 0.00 | 0. 0.65  1. 0.00 |
| 3 | [**EfficientNetB2**](https://keras.io/api/applications/efficientnet/#efficientnetb2-function) | 0. 0.73  1. 0.59 | 0. 0.38  1. 0.87 | 0. 0.50  1. 0.70 |
| 4 | [**EfficientNetB6**](https://keras.io/api/applications/efficientnet/#efficientnetb6-function) | 0. 0.57  1. 0.59 | 0. 0.61  1. 0.55 | 0. 0.59  1. 0.57 |
| 5 | [**EfficientNetB7**](https://keras.io/api/applications/efficientnet/#efficientnetb7-function) | 0. 0.49  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.66  1. 0.00 |
| 6 | [**ResNet50V2**](https://keras.io/api/applications/resnet/#resnet50v2-function) | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 7 | [**ResNet101V2**](https://keras.io/api/applications/resnet/#resnet101v2-function) | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 8 | [**ResNet152V2**](https://keras.io/api/applications/resnet/#resnet152v2-function) | 0. 0.98  1. 0.99 | 0. 0.99  1. 0.98 | 0. 0.98  1. 0.99 |
| 9 | [**VGG16**](https://keras.io/api/applications/vgg/#vgg16-function) | 0. 0.98  1. 1.00 | 0. 1.00  1. 0.98 | 0. 0.99  1. 0.99 |
| 10 | [**VGG19**](https://keras.io/api/applications/vgg/#vgg19-function) | 0. 0.98  1. 1.00 | 0. 1.00  1. 0.98 | 0. 0.99  1. 0.99 |
| 11 | **Google Net** | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 12 | [**InceptionV3**](https://keras.io/api/applications/inceptionv3) | 0. 0.98  1. 0.99 | 0. 0.99  1. 0.98 | 0. 0.99  1. 0.99 |
| 13 | [**InceptionResNetV2**](https://keras.io/api/applications/inceptionresnetv2) | 0. 0.98  1. 1.00 | 0. 1.00  1. 0.98 | 0. 0.99  1. 0.99 |
| 14 | [**DenseNet121**](https://keras.io/api/applications/densenet/#densenet121-function) | 0. 1.00  1. 0.97 | 0. 0.96  1. 1.00 | 0. 0.98  1. 0.98 |
| 15 | [**DenseNet169**](https://keras.io/api/applications/densenet/#densenet169-function) | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 16 | [**DenseNet201**](https://keras.io/api/applications/densenet/#densenet201-function) | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 17 | [**MobileNet**](https://keras.io/api/applications/mobilenet) | 0. 1.00  1. 0.99 | 0. 0.99  1. 1.00 | 0. 0.99  1. 0.99 |
| 18 | [**MobileNetV2**](https://keras.io/api/applications/mobilenet/#mobilenetv2-function) | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 | 0. 0.99  1. 0.99 |
| 19 | **My model** | 0. 1.00  1. 0.98 | 0. 0.98  1. 1.00 | 0. 0.99  1. 0.99 |

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| **Table 1. Brain tumor systems accuracy dataset name with data augmentation** | | | | |
|  | **Models** | | **Training accuracy** | **Validation Accuracy** |
|  | [**EfficientNetB0**](https://keras.io/api/applications/efficientnet/#efficientnetb0-function) | | 0.3313 | 0.4265 |
|  | [**EfficientNetB1**](https://keras.io/api/applications/efficientnet/#efficientnetb1-function) | | 0.3272 | 0.4690 |
|  | [**EfficientNetB2**](https://keras.io/api/applications/efficientnet/#efficientnetb2-function) | | 0.4507 | 0.4837 |
|  | [**EfficientNetB6**](https://keras.io/api/applications/efficientnet/#efficientnetb6-function) | | 0.2857 | 0.4281 |
|  | [**EfficientNetB7**](https://keras.io/api/applications/efficientnet/#efficientnetb7-function) | | 0.2763 | 0.4379 |
|  | [**ResNet50V2**](https://keras.io/api/applications/resnet/#resnet50v2-function) | | 0.1365 | 0.1078 |
|  | [**ResNet101V2**](https://keras.io/api/applications/resnet/#resnet101v2-function) | | 0.0741 | 0.0719 |
|  | [**ResNet152V2**](https://keras.io/api/applications/resnet/#resnet152v2-function) | | 0.0936 | 0.0327 |
|  | [**VGG16**](https://keras.io/api/applications/vgg/#vgg16-function) | | 0.3081 | 0.3693 |
|  | [**VGG19**](https://keras.io/api/applications/vgg/#vgg19-function) | | 0.2978 | 0.3480 |
|  | **GoogleNet** | | 0.2008 | 0.2598 |
|  | [**InceptionV3**](https://keras.io/api/applications/inceptionv3) | | 0.4592 | 0.4886 |
|  | [**InceptionResNetV2**](https://keras.io/api/applications/inceptionresnetv2) | | 0.4966 | 0.4902 |
|  | [**DenseNet121**](https://keras.io/api/applications/densenet/#densenet121-function) | | 0.5011 | 0.4902 |
|  | [**DenseNet169**](https://keras.io/api/applications/densenet/#densenet169-function) | | 0.4696 | 0.4804 |
|  | [**DenseNet201**](https://keras.io/api/applications/densenet/#densenet201-function) | | 0.4559 | 0.4641 |
|  | [**MobileNet**](https://keras.io/api/applications/mobilenet) | | 0.4107 | 0.4069 |
|  | [**MobileNetV2**](https://keras.io/api/applications/mobilenet/#mobilenetv2-function) | | 0.4158 | 0.4314 |
|  | **my model** | 0.4542 | | 0.4542 |

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| --- | --- | --- | --- | --- |
|  | **Models** | **precision** | **recall** | **f1-score** |
| 1 | [**EfficientNetB0**](https://keras.io/api/applications/efficientnet/#efficientnetb0-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 2 | [**EfficientNetB1**](https://keras.io/api/applications/efficientnet/#efficientnetb1-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 3 | [**EfficientNetB2**](https://keras.io/api/applications/efficientnet/#efficientnetb2-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 4 | [**EfficientNetB6**](https://keras.io/api/applications/efficientnet/#efficientnetb6-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 5 | [**EfficientNetB7**](https://keras.io/api/applications/efficientnet/#efficientnetb7-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 6 | [**ResNet50V2**](https://keras.io/api/applications/resnet/#resnet50v2-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 7 | [**ResNet101V2**](https://keras.io/api/applications/resnet/#resnet101v2-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 8 | [**ResNet152V2**](https://keras.io/api/applications/resnet/#resnet152v2-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 9 | [**VGG16**](https://keras.io/api/applications/vgg/#vgg16-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 10 | [**VGG19**](https://keras.io/api/applications/vgg/#vgg19-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 11 | **Google Net** | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 12 | [**InceptionV3**](https://keras.io/api/applications/inceptionv3) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 13 | [**InceptionResNetV2**](https://keras.io/api/applications/inceptionresnetv2) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 14 | [**DenseNet121**](https://keras.io/api/applications/densenet/#densenet121-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 15 | [**DenseNet169**](https://keras.io/api/applications/densenet/#densenet169-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 16 | [**DenseNet201**](https://keras.io/api/applications/densenet/#densenet201-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 17 | [**MobileNet**](https://keras.io/api/applications/mobilenet) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 18 | [**MobileNetV2**](https://keras.io/api/applications/mobilenet/#mobilenetv2-function) | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |
| 19 | **My model** | 0. 0.50  1. 0.00 | 0. 1.00  1. 0.00 | 0. 0.67  1. 0.00 |