

ALZHEIMER

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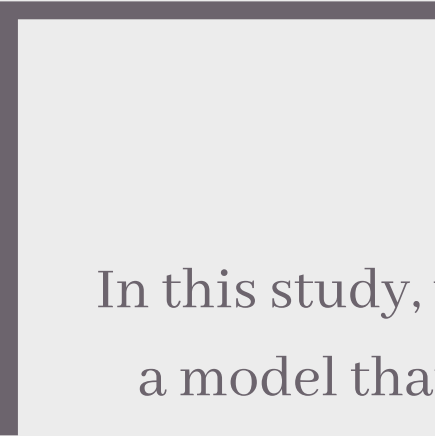
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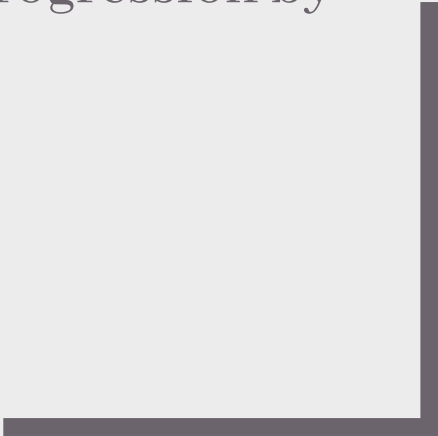
B A C K G R O U N D

Alzheimer's is a progressive disease, where dementia symptoms gradually worsen over a number of years. Image Processing plays an important role in the early detection of Alzheimer's disease so that patients can be prevented before irreversible changes occur in the brain.

Problem statement

A dark gray L-shaped line starting from the left, extending horizontally, and then turning 90 degrees to extend vertically upwards.A dark gray L-shaped line starting from the left, extending horizontally, and then turning 90 degrees to extend vertically downwards.

In this study, we have the problem of Alzheimer's disease. We built a model that detects Alzheimer's disease and its progression by inserting an x-ray.

A dark gray L-shaped line starting from the right, extending horizontally, and then turning 90 degrees to extend vertically upwards.

METHODOLOGY



Data Description

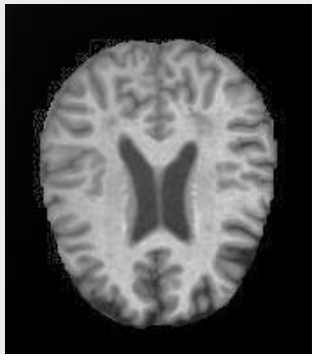
Resource

Kaggle with a total of 6400 images

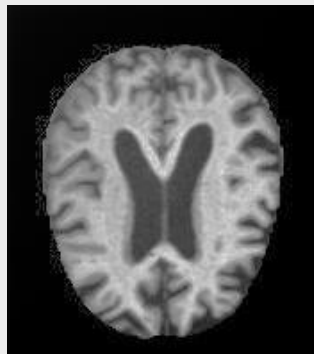
Split dataset

Train = 4897 , Validation = 864 , Test = 639

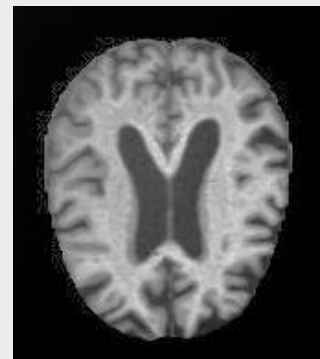
4 class of Images



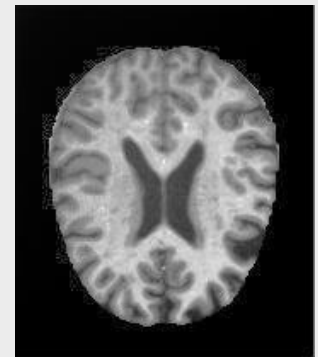
NONDEMENTED



MILDDEMENTED



MODERATEDEMENTED



VERYMILDDEMENTED

Transfer learning

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- mobilenet_v2
- VGG19
- VGG16
- InceptionV3

Results

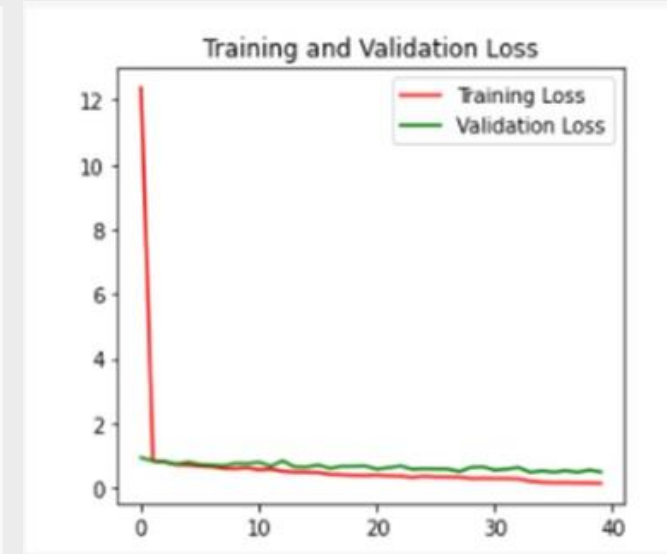
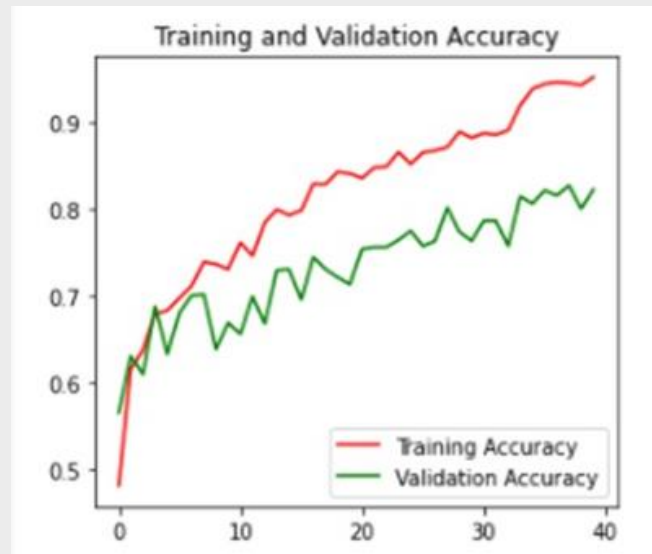
	Train	Validation
Mobilenet_v2	0.95	0.82
VGG19	0.81	0.77
VGG16	0.89	0.84
InceptionV3	0.86	0.76

The best model

Mobilenet_v2

Accuracy score :

- Training : 0.95
- Validation : 0.82
- Test : 0.83



The background of the slide features three stylized trees, each shaped like a human head in profile, facing left. The trees are rendered in a monochromatic, muted green-grey tone against a light grey background. The first tree on the left is solid and full. The second tree in the middle is also solid but has a slightly more textured appearance. The third tree on the right is depicted with a more intricate, branching structure, suggesting a different type of foliage or perhaps a more complex internal structure. They are all set on a flat, light grey ground.

Deployment

Tools

matplotlib



Future work

A dark gray L-shaped bar, consisting of a horizontal line extending from the left and a vertical line extending upwards from the right end of the horizontal line.

- Improve the model and website.
- present the project proposal the model for saudi alzheimer's disease association.

CONCLUSION

A dark gray L-shaped decorative bar is positioned to the right of the 'CONCLUSION' header. It consists of a horizontal bar extending from the left and a vertical bar extending upwards from the right end of the horizontal bar.

Applications of automated classification techniques using machine learning (ML) and artificial intelligence (AI) are constantly becoming more accurate than manual classification.

So we proposed a system that detects and classifies alzheimer's using deep learning algorithms.

THANKS..