

# ALZHEIMER

---

BY:

ABDULSALAM ALQARNI

AHAD ALMUTAIRI

BAYAN ALSHEHRI

RAYAN ALMUWAYNI



# TABLE OF CONTENTS

① BACKGROUND  
About Alzheimer and problem statement ?

② METHODOLOGY  
How the work is done?

③ TOOLS  
What are the tools used ?

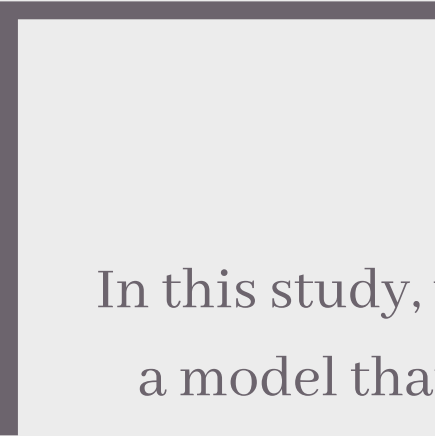
④ CONCLUSION  
Future work and summery



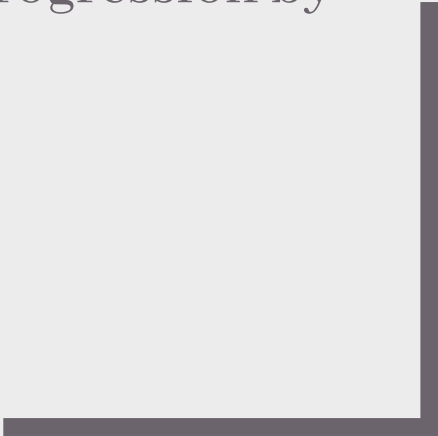
## B A C K G R O U N D

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 that starts with a horizontal segment extending to the left and then turns 90 degrees to continue vertically upwards.A dark gray L-shaped line that starts with a horizontal segment extending to the right and then turns 90 degrees to continue 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 that starts with a vertical segment extending upwards and then turns 90 degrees to continue horizontally to the left.

# METHODOLOGY

①  
Data Description

②  
Transfer learning

③  
Results

④  
Deployment



# Data Description

## Resource

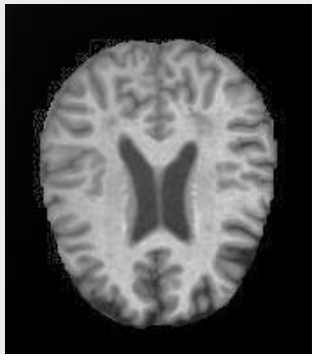
Kaggle with a total of 6400 images

## Split dataset

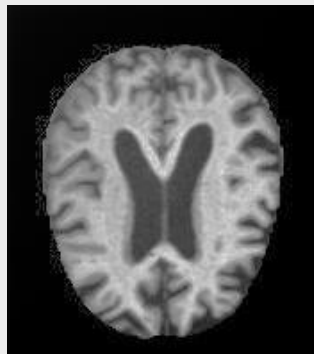
Train = 4897 , Validation = 864 , Test = 639

## 4 class of Images

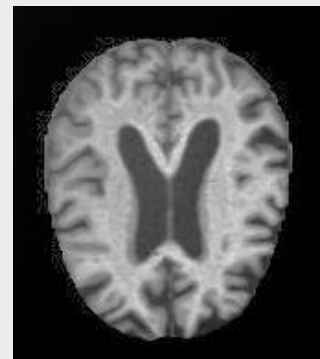
---



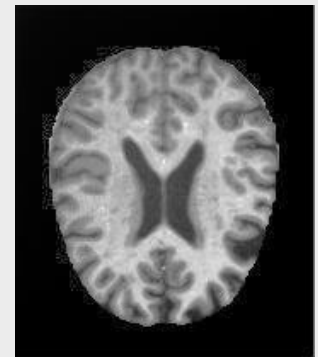
NONDEMENTED



MILDDEMENTED



MODERATEDEMENTED



VERYMILDDEMENTED

# Transfer learning

A dark gray L-shaped bar is positioned in the top-left corner of the slide, extending horizontally and vertically.

- 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

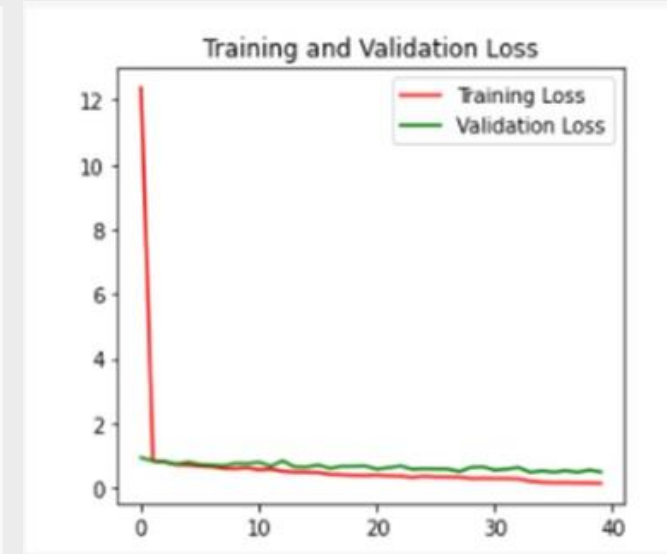
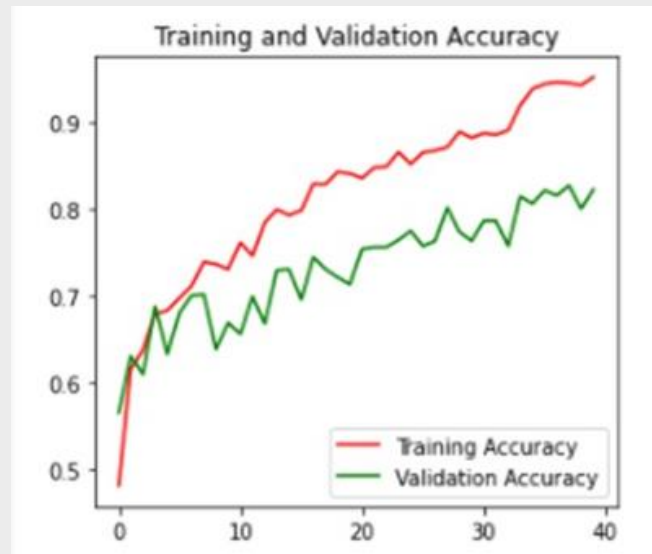


# The best model

## Mobilenet\_v2

Accuracy score :

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



The background of the slide features three stylized trees in profile, facing left. They are rendered in a light gray tone against a slightly darker gray background. The trees have dense foliage and are positioned in a row across the upper half of the slide. Below the trees, there is a white rectangular box with a dark gray shadow underneath it, containing the word "Deployment".

Deployment

## Tools



## Future work

A dark gray L-shaped bar, consisting of a horizontal segment and a vertical segment meeting at a right angle, positioned to the right of the 'Future work' header.

- 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..