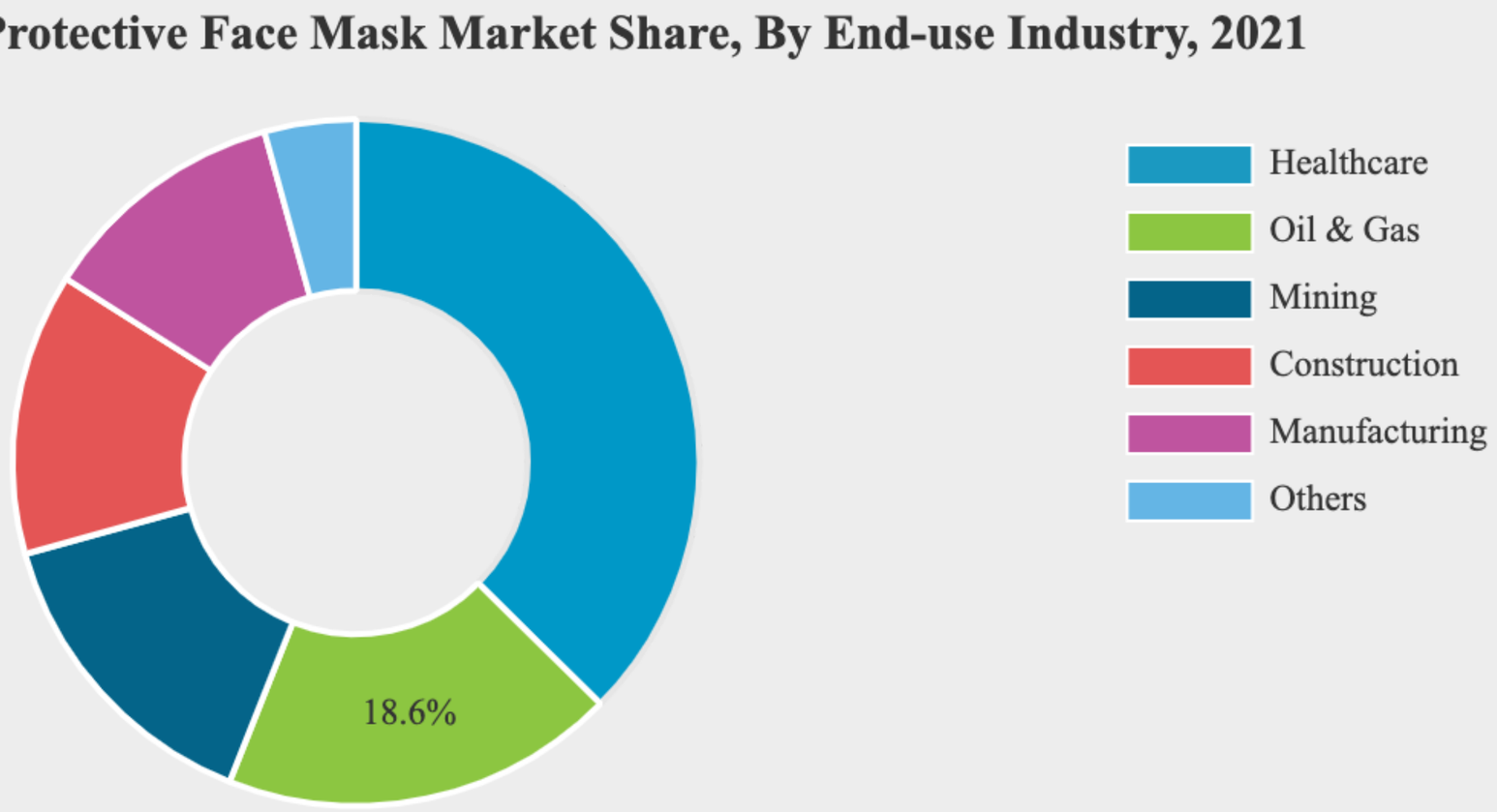
FACE MASKS:

In and Beyond Covid-19

Amid the COVID-19 crisis, wearing face masks has become a way of protection from the virus.

However, these masks were still in use before the pandemic hit our life.

FACE MASKS ARE ALSO USED IN THE FOLLOWING INDUSTRY:



FACE MASK MARKET REPORT:

Expected Revnue Forecast in 2027:USD 3Billion

Market Size Value in 2022:USD 25.1 Billion

Industries beyond Healthcare which use Face Masks:
1. Oil&Gas
2. Mining
3.Construction
4. Nuclear Industry
5.Manufacturing

North America held the major of the global market

Asia Pacific is expected to expand rapidly due to the re adoption of masks in highly populated country such as India and China.

INDUSTRIES WHERE MASK DETECTION SYSTEM CAN BE DEPLOYED:

- Pathology Labs
- Nuclear Labs
- Hospitals
- In manufacturing units
- Mining Sites
- Construction
- During FLU or virus spreads

If Face masks aren't worn properly they are useless therefore our aim is to implement a system for checking the same preferably without human intervention.Hence, the Mask Detection System can be put to use.

PROJECT EXPLANATION

•Import necessary libraries for Face Mask Detection
• Create a training dataset for training an image classification model; train.csv file contains information about images such as the image name, coordinates for bounding boxes of faces as well as the class-name for each bounding box.
• Build classification model (a convolutional neural network) for face mask detection using tensorflow.
• Extract the features from the image and convert to grayscale with focus on the face part of the image.
• After setting up the training and the CNN architecture, make the prediction whether a person in an image is wearing a face mask or not.
• For face detection : MTCNN was used. Multi-task Cascaded Convolutional Neural Networks (MTCNN) is a framework developed as a solution for both face detection and face alignment.

ARCHITECTURE