oral cancer

oral cancer detection

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COMPUTER SCIENCE

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01. PROBLEM DEFINITION

The main problem facing us in Oral cancer treatment is our ignorance that this sings for oral cancer By that we miss an opportunity for the patient to find solutions before the disease spreads and his situation deteriorates. And, if the tumor appears we need to contact doctors and mangment the patient time curation

02. OBJECTIVES

the aim of this project is to use image processing and machine learning techniques to detect the physical symptoms for oral cancer then provide the use with a google maps for nearest specialists and list of these numbers

03. METHODOLOGY

This is a convolutional neural network (CNN) model that consists of 12 layers: The model with accuracy 0.9870 1. `Conv2D` layer with 32 filters of size 3x3, using ReLU activation function and input_shape of (50, 50, 3). 2. `MaxPooling2D` layer with a pool size of 2x2. 3. `Conv2D` layer with 32 filters of size 3x3, using ReLU activation function. 4. `MaxPooling2D` layer with a pool size of 2x2. 5. `Dropout` layer with a dropout rate of 0.25 to prevent overfitting. 6. `Flatten` layer to flatten the output of the previous layer into a 1D vector. 7. `Dense` layer with 32 neurons and ReLU activation function. 8. `Dense` layer with 32 neurons and ReLU activation function. 9. `Dense` layer with 16 neurons and ReLU activation function. 10. `Dense` layer with 8 neurons and ReLU activation function. 11. `Dropout` layer with a dropout rate of 0.5 to prevent overfitting. 12. `Dense` layer with 2 neurons and sigmoid activation function.

04. DELIVERABLES

We made mobile application can take an image and detect if the user has oral cancer or not then led him to nearest doctors and google maps

05. USED TECHNOLOGIES

- -CNN
- -Flutter
- -ngtok
- -flask
- -Dart
- -firebase

06. REC0MENDATIONS

- ➢ Adding update function.
- ➢ Saving patient images .
- ➢ add chat between users and doctors .

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