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A Mobile Application for the Health Care Sector that Integrates Artificial Intelligence

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ABSTRACT: Artificial Intelligence takes on a crucial role in the medical industry. This platform is developed with the goal of facilitating the one-touch resolution of common health issues. By evaluating symptoms and keeping track of the population's health advancements, the project aims to satisfy the basic demands of the population. Additionally, the CNN algorithm and tensor-flow framework are integrated into the system, adding even another feature by allowing user to check and confirm any physical illness by feeding a photo of the affected area. People's health must be monitored at regular intervals in order to prevent future disaster and prevent deterioration. Health has long been a topic of concern. The system also integrates Chat-bot to assess minor illness.

KEYWORDS: Symptoms, CNN[Convolutional Neural Network], Tensor-Flow, Chat-bot.

I. INTRODUCTION

The concept of an AI-integrated mobile application for healthcare involves leveraging technologies such as machine learning, natural language processing, and computer vision to analyse vast amounts of healthcare data, extract meaningful insights, and deliver intelligent recommendations to users. This fusion of AI and mobile technology enables the application to perform tasks such as symptom analysis, disease management, remote monitoring, virtual consultations, with enhanced accuracy and efficiency. Numerous advantages of a mobile application with AI integration exist in the healthcare industry. It enables people to monitor their health state, obtain individualized healthcare information, and get prompt advice for illness prevention and management. By using the program, healthcare practitioners can increase patient access to care by delivering quicker and more accurate diagnoses, monitoring patients from a distance, and offering virtual consultations.

A chat-bot function that is implemented into this project serves the primary objective of solving small issues fast and accurately.

II. LITERATURE SURVEY

EXISTING SYSTEM

The current system that supports and offers medical assistants is not very accurate when it comes to outcomes. because most systems are created with a business-oriented mindset. lacks a focus on results. The artificial intelligence models incorporated into the systems or apps are not very properly trained and were trained using scant data. This results in erroneous results and which causes a system or program to react improperly to input from users or patients.

Using the technology that has endured, the user can look for the required doctors. Users are offered the chance to test for minor illness by entering their symptoms. Users can interact with doctors and other medical experts by permitting dialogues. Some of these apps let users fill out surveys to enter their symptoms, after which they'll get a list of medical precautions. These programs are used in order to diagnose problems and analyze data.



PROPOSED SYSTEM

Tensor-Flow algorithm and Convolutional Neural Network are integrated into the system to identify and offer information on the main physical illnesses. As an illustration, the technology currently allows for the detection of brain tumors using image capture. This system will also suggest other specialists based on the obtained results. In order to address the issue of tailored care, system users can get the same services provided by other systems without paying any money.

The system has a chat-bot to address any questions or minor problems.

Advantages

- The application is completely under the user's control.
- Through image classification, the user can learn more about the health issues he has.
- Medical Clarification
- Low-Cost appointments
- Clarification on medical conditions.

III. METHODOLOGY

Agile Method:

The system was created utilising the agile methodology, whereby each system component was produced iteratively for quick and efficient system development. To enable ongoing development and improvement, models were created, tested, and gradually incorporated into the app.

Data Collection:

The information needed to construct certain systems was acquired from a variety of sources. To assess what the suggested system could provide, a thorough literature review was conducted. To analyse and make predictions for the type of disease or disorder, a large number of datasets that were dispersed across the internet were used. The doctors are listed with the help of an API key

AI Model Selection and Development for Disease prediction:

To determine the user's ailment kind, the system has been connected with the CNN algorithm. The system underwent numerous layers of training and validation, including CNN layers, ReLu layers, and data pooling. It was necessary for the system to pass through these layers in order to produce reliable results.

The use of CNNs for disease prediction necessitates a sufficiently sizable and diverse dataset, as well as thorough evaluation of all applicable laws, regulations, and ethical and legal issues. Additionally, accurate interpretation and validation of the model's predictions depend on healthcare practitioners' subject experience.

IV. IMPLEMENTATION

Technology Stack: With the aid of Android Studio and the flutter framework, the proposed application is primarily created as an android and IOS application. This app's various features were developed utilising a variety of technologies, including Python, the CNN algorithm, and the necessary libraries. The technological stack that was used to construct this project is shown below.

- **Application Implementation:** Android Studio, Vs Code, Flutter framework
- **Chat-bot implementation:** Python Flask.
- **Cloud tools:** Firebase



V. EXPERIMENTAL RESULTS

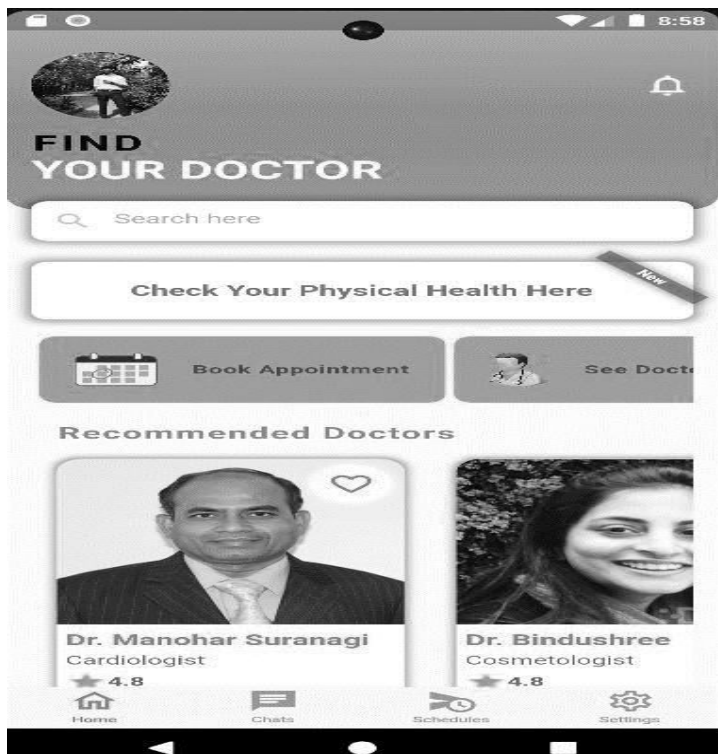


Fig1.1 Doctor's List



Fig1.2 Chat-Bot

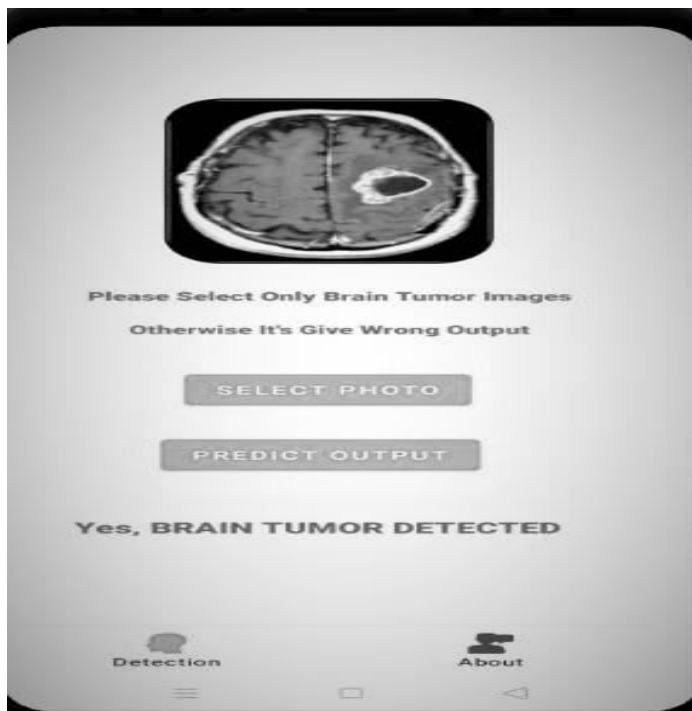


Fig1.3 disease prediction [Brain tumour detection]

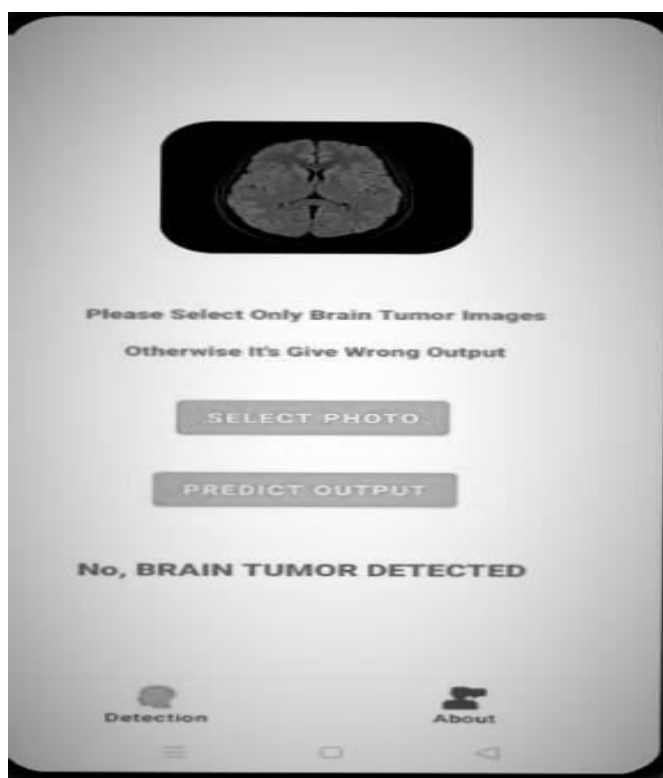


Fig1.4 No tumour



VI. CONCLUSION

The AI Integrated health care app offers a useful remedy that makes use of technology to enhance patient care and health administration. The app gives users the power to take charge of their health and communicate with medical professionals more efficiently by providing a wide range of capabilities, including access to trustworthy health information and health tracking. The software has the potential to improve patient experiences and encourage improved health outcomes because to its user-friendly layout and practical features.

An effective and user-centric health care solution is provided by the AI Integrated Health Care App, which combines cutting-edge technology, artificial intelligence, and a wide range of features. The app intends to revolutionise how people manage their health by utilising AI, encouraging proactive care, individualised therapy, and general well-being.

The system will be able to categorise photos and assess ailments like brain tumours in real time with the aid of Tensor-Flow and CNN [Convolutional Neural Network].

REFERENCES

- [1]. Vois Papaioannou, Athanasios Tsakalidis, George-Peter K Economou, "A robust smat device app assisting medical diagnosis.", - July 2016
- [2]. Sindhumol S, Athira Ardhet, "Artificial Intelligence based Android App for Medical Consultation", - July 2019
- [3]. P.Nethrasri, Rohit Surthi, Amit Yadav, "Artificial Intelligence Based Healthcare Assistant and Consulting Android Application", - June 2021
- [4]. Anindya Pradipta Susanto a,b , Hariyono Winarto b,c,* , Alessa Fahira b , Harits Abdurrohman d , Arief Purnama Muharram b,d , Ucca Ratulangi Widitha b , Gilang Edi Warman Efirianti b , Yehezkiel Alexander Eduard George b , Kevin Tjoa b, "Building an artificial intelligence-powered medical image recognition smartphone application:", - July 2022
- [5]. SIMARJEET KAUR1 , JIMMY SINGLA , LEWIS NKENYEREYE , SUDAN JHA , (Senior Member, IEEE), DEEPAK PRASHAR , (Member, IEEE), GYANENDRA PRASAD JOSHI , SHAKER EL-SAPPAGH , MD. SAIFUL ISLAM , AND S. M. RIAZUL ISLAM , "Medical Diagnostic Systems Using Artificial Intelligence (AI) Algorithms: Principles and Perspectives" – Dec 2020
- [6]. Yaganteeswarudu, Akkem. "Multi Disease Prediction Model by using Machine Learning and Flask API." - 2020



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