PROTOTYPE MODEL OF IDENTIFICATION OF DISEASES IN DOGS

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ABSTRACT: In this research we have focused on the identifying and diagnoses the varied common diseases of dogs. Sometimes, the dog is infected with some disease and the guardian of the dog takes the dog to the veterinary clinic, but sometimes due to the lack of time or of any other reasons the dog health is unwell and no one takes it to the clinic so this makes the situation and dogs health worst. So, there is a need to have ease-to-access and quick approach to identify the diseases in dogs i.e.,dog'sdiseases diagnosis system to avoidthese situations. However, to avoid this situation, in this paper we have objected to develop a prototype system with set of rules to identify the disease and start the diagnosis at the mild state.

I.   INTRODUCTION:

Now a days, Dogs are considered as the best friend of humans**.** Keeping domestic animals have become the flair of men for a long time. Many people keep the animals for several different reasons. Some keep for their pleasure; some keep them as their life-companion and some for their security purpose. And there are many different reasons to have a dog as a pet at their own. Whatever the reason for having a dog as a pet, the person as an owner will take care and groom their dog at their level best for the betterment of the dog. Some owner, in handling their dog's healthcare tend to assume that certain diseases are mild, and they are not seeking the veterinary help in diagnosing the diseases.(Munirah M. Y. at el., Nov 2016)Some are treating their infectious dogs at their own. Sometimes, the treatment provided is not up to the mark and this makes the dog health more severe and it worst the condition. Therefore, the dog's live is endanger. If noticing the dog's activities on the daily basis and the sudden change in their behavior can be observed by owner which can lead to identification of the disease at the mild stage.So, this can help the owner to detect the disease and can start the treatment at the mild

stage which helps the owner for taking care of their dog. Innovation in veterinary care and a better understanding of canine healthcare management through each phase of dog's life cycle such as growth, maintenance, reproduction, lactation and senility have helped in contributing to welfare and a longer life expectancy for dogs. (Sakshi s. at el, Feb 2017)

In this research, we have mostly focused on the most common diseases of the dogs, which can be identified by the user using the dog's symptoms and their dog's behavior. Using the symptoms, the identification of the disease gets easier and thetreatment gets started immediately. This research will address all the users for quick, effective and efficient identification of the diseases. There are ten types of common diseases have been identified for this research; Hemorrhagic gastro enteritis, Diarrhea, Pancreatitis, Salmonella infection, Acute gastro enteritis, Colitis. These are the disease which can be identified easily with their symptoms and if treatment of this diseases gets started at mild state so, it will be good for the betterment of the dog's life. Otherwise, ignorance of these diseases can lead to the death of some. So, this research helps in identification, to increase awareness, to encounter and to prevent these common diseases that occurs in the dogs and provide medical treatment to cure the dog.

II. LITERATURE SURVE:

(Munirah M. Y. at el., Nov 2016) This research paper proposes a diagnosis system which helps in recognition of dog's diseases and provide

them a suitable treatment or advice. The user has to select answers for some questions asked by the system. Hence, using those answers the system will generate the output. Along with this,administrator can login into system and manage the information in the Online Dog Diseases Diagnosing System. In future they are planning to design the complete system to help user diagnosing and to determine the skin diseases and provide treatment suggestions. This paper gave us a set of rules to develop our system which is the requirement of the time.

Rufai M. M1. et al.,2018) In this paper, the author has designed a mobile application where the user has to login/sign in, further the user has to select the symptoms that has been noticed, that what is wrong with their dog. After using the symptoms, it will provide the output as disease and recommendation of the treatment of that disease. In addition to this, they have provided the facility as the veterinary expert can add any information of the newly disease to the knowledge base of the application whenever it will exist.

(Sakshi s. at el, Feb 2017) This paper focuses on the Awareness on Common Diseases Encountered in Pet Dogs and Constraints Faced in Prevention of Diseases. They have randomly selected two hundred and forty pet dog owners from Bengaluru district and arranged a door-to-door interview of the peoples regarding the awareness of the common diseases recognized in the dogs and the constraints that are faced while preventing the diseases. Therefore, they found as there is an urgent need to wide up all the knowledge of the dog owners regarding scientific rearing of dogs by effective proclamation or broadcasting of the information based on prioritization of the information needs of the dog owners.

(Ketan D. Bodhe at el,) This paper describes the Detection and management of diabetes using android mobile phone application and rule base system. Where the system accepted the information of the patient entered by patient itself or under the observation of doctor. They have developed the 3 main part of the system where they record the real-time data of the patient, they can forward the data to the central server and there the server stored the data and it is analysed by the expert system. While diagnosing the diabetic the system will ask the user few questions where they have to give bipolar answers. The system analyses the risk of the diabetic that there is a mild chance, severe chance, high risk chance, very high-risk chance, diabetic or not.

(Jelle Stans,2020) In this research, A brief overview of animal symptom checkers the author has analysed some animal symptoms checkers. Analysing all those it is studied as there is a need to do more study and research on the animal symptom checkers because there is a need to have the system which will be having more accuracy, more usage and should contains more usable tools. The author has asked for the accuracy of the animal symptom checks as that of the human symptoms checker.

(Ketan D. Bodhe at el,2014) This paper proposes the mobile health care system for diabetic patients. This system takes the information from the patients and pass the information to the expert system which helps for rapid diagnosis of the disease for the remote area people. It analyses the disease by collecting real-time information of the patient, by providing it to the expert system and it is analysed by the expert system for further process. It provides the information that how much severe is the illness such as; mild state, risk state, high risk state, diabetic or not.

(Rahul Sehgal at el.,2011) This research paper overviews the survey of the population of the stray dogs of the Ahmadabad, city of Gujarat. In this paper, the main focus is on to count the number of males, Female, puppies, operated male, female dogs. It also studies the index of abundance of dogs for each ward.

III. PROPOSED SYSTEM:

This research considered the use of Desktop application technology for the identification of diseases in dogs. This will carry out the identification of diseases easily and effectively by providing the easy mode to the user at their tip of hand.

The common diseases that we are providing under this prototype system are: Hemorrhagic gastro enteritis, Diarrhea, Pancreatitis, Salmonella infection, Acute gastro enteritis, Colitis.

o Hemorrhagic gastro enteritis: Hemorrhagic gastro enteritis is also known as Acute Hemorrhagic Diarrhea Syndrome. It affects

to any breed, size, age, or to any gender, but mostly it is founding in small and toy-breed dogs.Most pets affected have been healthy prior to having signs, with no historical environmental changes or other ongoing disease involving the stomach and/or intestines.

o   Diarrhea: Diarrhea is the output of the faster movement of the faecal materials through the intestine, making decrease in the absorption of water, nutrition's and other essential materials for the body. Diarrhea associated with mild conditions can be easily resolved with simple treatments.

o   Pancreatitis: The pancreas is a vital organ that lies on the right side of the abdomen adjacent to the stomach. The pancreas produces enzymes to assist in food digestion and hormones such as insulin, which regulates blood sugar or glucose metabolism. When the pancreas becomes inflamed, this situation is called as Pancreatitis. There is not gender,age or breed predisposition for this pancreatitis disease.

o   Salmonella infection: Salmonella is a bacterial disease, which is common in dogs. Shedding of dogs can connect to the illness of human beings, which are sharing the home with the shedding pets. In this disease, enteritis is very common.

o   Acute gastro enteritis: This is the state of disease, it occurs when consumed food or water is contaminated with pathogenic microorganisms or their toxins is consumed by the dog. It mostly refers to the inflammation of the intestine and stomach.

o   Colitis: In this disease, it generally refers to the inflammation of the large intestine (Colon). It also occurs due to the ingest of contaminated food, being in-touch with infected dogor after chronic exposure to wet environment.

The user needs to Sign-in or Log-in, if the person is the new user for their access to the application. It provides the user to select the symptoms for the list, on the basics of the selected symptoms the output will be generated as the disease name. Along with

this, the user will be provided the detailed information of the disease.

The user will be getting the E-mail for the regular check-up of their dog after the 30 days of their visit to the doctor. The information regarding the vaccines of the dogs is also provided.
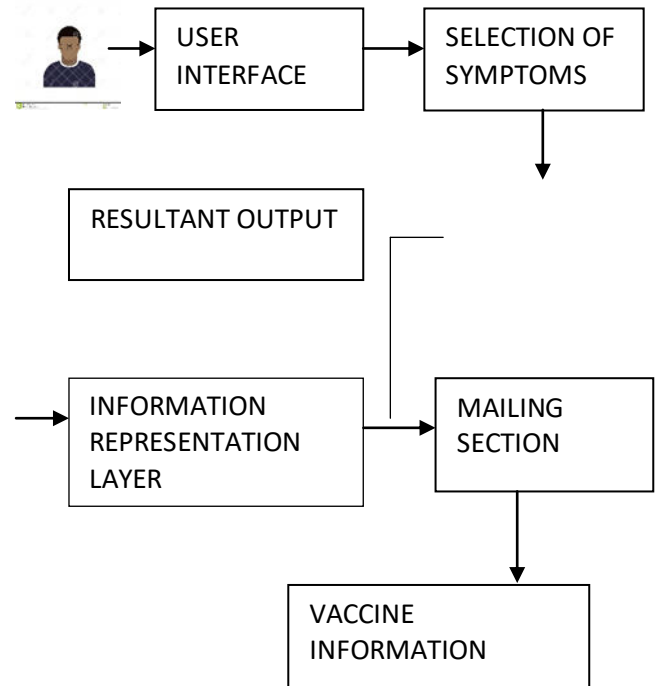
- USER INTERFACE: To have the access of the prototype system the user has to log-inwith some credentials, or
  need to sign-in if the user is the new to the system to have access.

- SELECTION OF SYMPTOMS: The user will get the list of symptoms from where the user has to select the number of symptoms that has been noticed on their dog for the further process.

- CHECKS WITH THE DATABASE: The symptoms selected by the user will be analysed at the backend with the data at the database and then whatever the symptoms are matching with the database it will provide the output respectively.

- RESULTANT OUTPUT: After analysing with the database the system will provide the output as the Disease name i.e., disease matching with the symptoms selected by the user.

- INFORMATION REPRESENTATION LAYER: Here, the complete description of the diseases is provided along with the images for the detailed information of the disease to the user.
- MAILING SECTION: This section sends the mail to the user after 30 days for the regular check-up of their dog from the day of current check-up.
- VACCINE INFORMATION: This section provides the detailed information about the vaccines that are given to the dogs from their birth to, information about the monthly vaccination.

IV.CONCLUSION:

This research develops a desktop application for the easy and effective identification of diseases. For the people living at the remote areas, it will be easier for them to encounter and start the diagnoses of the disease at the fastest as it is possible to avoid the chance of reaching the disease at the severe state. This will be helpful for dog owner, for the Organization that are looking after the stray dogs. This proposed system consists of many different modules such as: log-in/sign-in, Analysis phase and the Report phase. This will result into the decrease of number of deaths occurring due to the late identification of the diseases, it will make the identification faster and the treatment will start at the proper time. The section providing the remainder mail to the user for the regular check-up of their dog will be more helpful for the proper medical routine of the dog. The vaccine information is also provided so, the user can vaccinate their dog as per the need. The detailed information of the disease is also provided. This result will be helpful for the identification of diseases in other animals and also useful for the veterinary clinics for carried out the further treatment.

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