

**PUPPYDIA, DOG HEART DISEASE AND TICK BONE
FEVER DIAGNOSIS SYSTEM**

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Abstract

Dogs are known as the best friend of human. In the past, adopting dogs were considerably grown where people tend to consider dogs as part of the family. But the most common problem all dog owners suffer with is not being able to identify their dogs' wellbeing. Frequently visiting a veterinarian is not a practical scenario in a country like Sri Lanka. Most of the dog owners located in urban cities are leaving their dog on their own for at least 5 hours per day. Dogs instinctively hide their symptoms most of the time from their masters.

How can a dog owner bear the sudden death of a dog without knowing that the dog has suffered enough before the death. In fact, most of the diseases are not sudden for dogs except an accident. If anything abnormal happens with the dog, dog owners must have noticed that. Even though owners identify any behavioral change of the dog, they can't be sure to identify the reason for that. This is where a subjective project solution helps dog owners to know how their dogs are doing and if anything is wrong, what has gone wrong. Puppydia is a dog heart disease and tick-borne fever diagnosis system by reading their inner body details. Puppydia has been implemented with a trained neural network that can identify vital signs for heart disease and tick-borne fever based on the dog's age, weight, heart rate, temperature, respiration, sleeping, and calories gained. Neural network functionality has been clearly mentioned in the literature review of the project.

Requirements gathering for the subjective project had several stages and techniques where dog owners, veterinarians, and technical experts were contributed. In this particular project, the data capturing of dogs has been simulated with a web application which can be used to transmit data into the neural network. The Puppydia system has been implemented, overcoming the issues identified in existing applications and products. After implementation, the Puppydia system has been evaluated with industrial experts and end users. The author himself conducted a self-evaluation to verify whether the project objectives have been met.

Keywords – Dog disease diagnosis, Dog heart disease diagnosis, dog tick-borne fever diagnosis.