Design and Analysis of Smart Sensing System for Animal Emotions Recognition

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 169 - Number 11

Year of Publication: 2017

Authors:
Erick Alphonce Massawe, Michael Kisangiri, Shubi Kaïjage, Padmanabhan Seshaiyer

10.5120/ijca2017914797

Abstract

Recently, animal emotion recognition has become an important field for developing intelligent systems for tracking and monitoring rhinos and elephants. In this work, a smart sensing system that helps in detecting animal emotions based on information from physiological parameters obtained from sensors attached on animal body, has been designed. The signals are continuously obtained from a heart rate sensor, galvanic skin resistance sensor and body temperature sensor. After amplifying and filtering of the signals from the sensors are done, they are processed in the microcontroller and transmitted wirelessly using GSM modem and ZigBee technologies. The signals which are received from the system are displayed and stored in the database where they are analyzed visually for patterns. The four basic emotions parameters observed in this project are happy (excited), sad, angry and neutral (relaxed). In this research dog have been used for the pilot study.

References


Index Terms

Computer Science Artificial Intelligence

Keywords

Animal emotion, smart sensors, heart rate, skin temperature, skin conductance, voice control, zigbee, K-means clustering algorithm, animal, rhino, elephant