**Project Title:**

IoT-Vision enabled Assistant for Epileptic Patients.

**Project Supervisor:**

Mr. Samyan Qayyum Wahla

**Members:**

|  |  |
| --- | --- |
| **Name** | **Registration** |
| Muhammad Ali Murtaza | 2020-CS-114 |
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**Description:**

IoT-Vision enabled Assistant is a system that provides aid for people with epilepsy utilizing technologies of IoT and Computer Vision. This method focuses primarily on identifying epileptic episodes by continuously monitoring the patient using cameras and smartwatches. The data collected by the devices is wirelessly transmitted to a cloud-based server, where it is analyzed in real-time using machine learning algorithms to detect seizures. An alarm is promptly delivered to the patient’s caregiver through the available interface when an algorithm detects a seizure. Real-time monitoring of the patient's condition can also help doctors and healthcare professionals track the patient's condition and adjust their treatment plan accordingly.

IoT-based seizure detection is a promising technology that can improve the lives of patients with epilepsy. The system offers several benefits, including early detection, improved quality of life, and real-time monitoring. As the technology continues to evolve, IoT-based seizure detection systems may become more accurate and effective, helping more patients with epilepsy manage their condition. One of the most significant benefits of the IoT-based seizure detection system is early detection which can help patients receive prompt medical attention to prevent from accidents and injuries that can occur during seizures.

**Comments of Supervisor:**

Signature of Supervisor

* Title
* Abstract
* Keywords
* Introduction
  + Background
  + Motivation
  + Objectives
  + Scope
  + Problem statement
  + Challenges
  + Assumptions
  + Possible application areas
* Relevant work
  + Comparison with state of art (latest work in this area) work
  + Overall gap
* Proposed solution.
* Experimental setup
* Results
* Conclusion
* Future Directions
* Title
* Abstract
* Keywords
* Introduction
  + Background
    - Stats on epilepsy patients globally and locally
    - Consequences of epilepsy
    - Consequences of not attending the seizure
  + Motivation
    - Reducing the burden on nursing sector (50 words)
  + Objectives
    - To model the behavior of patients/elderly for the detection of abnormal events
    - To produce a signal for the early detection of seizures for the prevention of situation
  + Scope
    - 2 Cameras
    - Environment: Home + Hospital
    - Normal activities: Drinking, Eating, sitting, laying, standing, reading.
      * (Make hierarchy of above activities)
    - Age: 60+
  + Problem statement
    - Technically which problem will be solved?
  + Challenges
    - Different lighting conditions
    - Different resolution of cameras
    - Synchronization of multiple cameras
    - Occlusion
  + Assumptions
    - Power of camera
    - Internet bandwidth
  + Possible application areas
* Relevant work
  + Comparison with state of art (latest work in this area) work
  + Overall gap
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