

# **SISTEMA DE DETECCIÓN DE ATAQUES EPILÉPTICOS DURANTE EL SUEÑO EN NIÑOS DE 3 A 9 AÑOS.**

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Trabajo de Investigación del Programa Ingeniería Biomédica

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## RESUMEN

El objetivo de este artículo es presentar un equipo capaz de registrar con precisión ataques epilépticos, obteniendo como beneficio el ahorro de tiempo y recursos médicos a partir procesando las señales emitidas por el giroscopio. El desarrollo del dispositivo requiere un enfoque estratégico donde se subdivide el proceso en dos componentes, uno centrado en la parte electrónica y otro en la interacción externa con el paciente, demuestra ser una estrategia efectiva para el desarrollo del dispositivo. Este enfoque garantiza la optimización de cada etapa del proceso, desde la simulación hasta el montaje y las pruebas, y desde el diseño hasta la integración con el paciente. El análisis detallado de cada componente permite una toma de decisiones informada en términos de materiales, presupuesto y cronograma, lo que en última instancia conduce al logro exitoso de los objetivos de desarrollo del dispositivo.

**Palabras clave:** Epilepsia, crisis tónico-clónica infantil, detección, giroscopio, Arduino.

## ABSTRACT

The objective of this article is to present a device capable of accurately recording epileptic seizures, obtaining the benefit of saving time and medical resources by processing the signals emitted by the gyroscope. The development of the device requires a strategic approach where the process is subdivided into two components, one focused on the electronic part and the other on the external interaction with the patient, proving to be an effective strategy for the development of the device. This approach ensures optimization of every stage of the process, from simulation to assembly and testing, and from design to patient integration. Detailed analysis of each component allows for informed decision making in terms of materials, budget and schedule, ultimately leading to the successful achievement of device development goals.

**Keywords:** Epilepsy, child tonic-clonic seizures, detection, gyroscope, Arduino.

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