

## ABSTRACT

The security system is one of the important aspects concerning several fields, such as agricultural farms, factories and defence bases. Electric fencing plays a vital role in security technology as it keeps out animals and human intruders; protects livestock; aids in safeguarding high-security areas and military bases. Electric fences used for agricultural fencing and other farms for animal control sometimes result in endangering the wildlife population. So, a smart electric fencing system is proposed in this paper that would provide security and safety for human beings and at the same time does not affect wildlife. This is done by fragmenting the entire fencing into several minor segments. Segmental electrification of a fence using smart devices like passive infrared sensors are provided and they sense the motion of both humans and animals. On sensing a motion, it produces a short electric pulse through a controller, only to threaten the animals/humans who intend to cross the fence. Each segment is powered separately which results in continuous operation. Even when a fault is detected in any one of the segments, it will not affect the continuous operation in other segments. This simple breakage/fault monitoring system improves the overall effectiveness of the security system. Also, it is easy to maintain the entire fencing during the live operations without a shut down. In addition to that, an audio alert system is activated selectively, using a smart device to improve the crops' growth and food production.