

ABSTRACT

For the smooth operation of daily commutes, asphalt pavement issues are the primary concern of both developing and developed nations. Numerous studies have been conducted on the detection of potholes, which pose a danger to automobiles and passengers and have the potential to cause an accident. The purpose of this work is to investigate the potential of deep learning models and implement three exceptional deep learning models for pothole detection on edge devices. A low-cost system for real-time detection of road pavement surface conditions is proposed in this work. In order to obtain data regarding the state of the road surface, the time–frequency domain processing of the MEMS signals that are provided by ‘on-car’-sensors is carried out. High classification rates indicate that the proposed system is effective at identifying the type and presence of distress.