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-  **ABSTRACT**
-  **PRESENTATION**
-  **PAPER** 

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DETECTION OF OBJECTS WITH DIFFERENT THERMAL SIGNATURES IN THERMOGRAMS USING MACHINE LEARNING

This paper analysed the capabilities of models based on the use of artificial intelligence to detect objects in images containing different thermal signatures. Five types of models were selected for detecting objects in RGB images and their detection capabilities in thermographic images were investigated. To create a suitable database, publicly available records of thermal sequences were used, as well as taking their own images, using available cameras. The images were

taken in an urban environment. Models were trained on the prepared set. In order to test their capabilities in conditions resembling real ones, a special test dataset was created to simulate conditions such as parking lot monitoring. The results of the study are expected to motivate further work on detection systems based on thermal images, as this offers great potential for detecting objects in difficult weather conditions and at night, among other conditions.