

Geometric Figure Identification System Implemented in the AutoMiny 4.0 Platform, Based on Computational Vision.*

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Abstract

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Abstract:

The development of new tools with the support of Artificial Intelligence (AI) models continues to progress significantly. Computational Vision, a subfield of AI, provides a mechanism that can interact with its environment by capturing and processing digital images. This paper presents the development of a system that enables the identification of geometric figures by extracting seven mathematical features using computer vision techniques. These features were used to train two Machine Learning classification models, of which one stands out for presenting a classification percentage of 99%. The model was tested in the AutoMiny 4.0 platform to provide the robot with actions based on the identification of each figure, thereby enabling its autonomy in decision-making.

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Figures



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