Dirección de Formación Académica

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Tesis: **"STEREO VISION BASED SLAM IN DYNAMIC OUTDOOR ENVIRONMENTS USING DEEP LEARNING"**

Resumen:

This thesis presents a Simultaneous Localization and Mapping (SLAM) system focused on dynamic environments using convolutional neural networks. The proposed system employs a stereo camera as the input of the SLAM for the acquisition of left and right images and depth map. The neural network is used for object detection and segmentation to avoid erroneous maps and wrong system location. The main job of the neural network is to find out objects within the scene, and to use its features for dynamic detection. Moreover, the processing time of the proposed system is fast and can run in real-time being able to run in outdoor and indoor environments.