

Development of a road surface defect detection system using a deep learning model on a Raspberry Pi device.

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Abstract: In this study, we identify the necessity of developing a road surface defect detection system to enhance traffic safety. The objective is to build and deploy a system based on a deep learning model that enables automatic detection of road surface issues. The research methodology combines theory with experimentation, applied to a Raspberry Pi device to optimize efficiency and practical applicability. The expected outcome of this project is to provide a sustainable solution for road surface quality control, contributing to the construction of safer transportation infrastructure.

Keywords: Road defect detection system, deep learning model, Raspberry Pi