Sample

Classification of Cracks and Non-Cracks in Concrete Using TensorFlow

Concrete is a fundamental material in construction, and its integrity is crucial for the safety and durability of structures. Cracks in concrete can indicate underlying issues and may compromise structural stability. Early detection and classification of these cracks are essential for maintenance and repair. This project focuses on leveraging TensorFlow, an open-source machine learning library, to develop a model for classifying images of concrete surfaces into cracked and non-cracked categories. Objective The primary objective of this project is to build and train a deep learning model using TensorFlow to automatically classify concrete images as either "cracked" or "non-cracked." This model aims to assist in the automated inspection of concrete surfaces, reducing the need for manual inspection and improving the efficiency of maintenance processes. Dataset A comprehensive dataset is required for training and evaluating the model. The dataset included Images of Concrete Surfaces: High-quality images depicting various concrete surfaces with and without cracks.