Scheduled maintenance: On Tuesday, November 3rd, Zenodo will be unavailable between 08:00 and 08:15 UTC for an infrastructure upgrade.

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Dataset Open

Curated Dataset and Inference Results for AI-Based Bridge Defect Detection Using Images and Videos

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This repository contains curated dataset and inference results used in the study:

"AI-powered bridge defect detection and condition assessment using drone-collected visual data."

Contents:
1. curated_dataset_images_annotations: Annotated images with YOLO-format labels for eight defect classes.
2. curated_inference_results_images: Model predictions on test images.
3. curated_dataset_bridge_videos: Raw bridge inspection videos.

Defect classes:
Crack, ACrack, Efflorescence, WConccor, Spalling, Wetspot, Rust, ExposedRebars.

All annotations are manually created and used as ground truth for training and validation.
Inference results are generated using a trained YOLO-based instance segmentation model.

This dataset supports reproducibility and transparency of the proposed methodology.

Files

01_curated_dataset_images_annotations.zip

Files (20.1 GB)

01_curated_dataset_images_annotations.zip

md5:8638957f25b0f9bf0415daea1ce50bde

1.6 GB

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02_curated_inference_results_images.zip

md5:9eb98ab436336177f5543eb9340859f3

94.2 MB

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03_curated_dataset_bridge_videos.zip

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OpenAIRE

Keywords and subjects

bridge inspection | defect detection | YOLO | drone imagery | drone video | structural engineering | computer vision | instance segmentation | UAV | infrastructure monitoring

Details

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