

Computer Vision Tools for Bridge Inspections and Reporting

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Project Summary Prepared for:
TriDurLE

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Funding Agencies & Collaborators

- National Center for Transportation Infrastructure Durability and Life Extension (TriDurLE), and University Transportation Center(UTC).
- Alaska Department of Transportation & Public Facilities



TriDurLE

National Center for Transportation
Infrastructure Durability & Life-Extension



Project Goals and Objectives

The main goal of the present study is to develop practical AI tools that help inspectors with the defect detection and measurement, and facilitate the inspection reporting following the National Bridge Inventory and the AASHTO Manual for Bridge Element Inspection requirements.

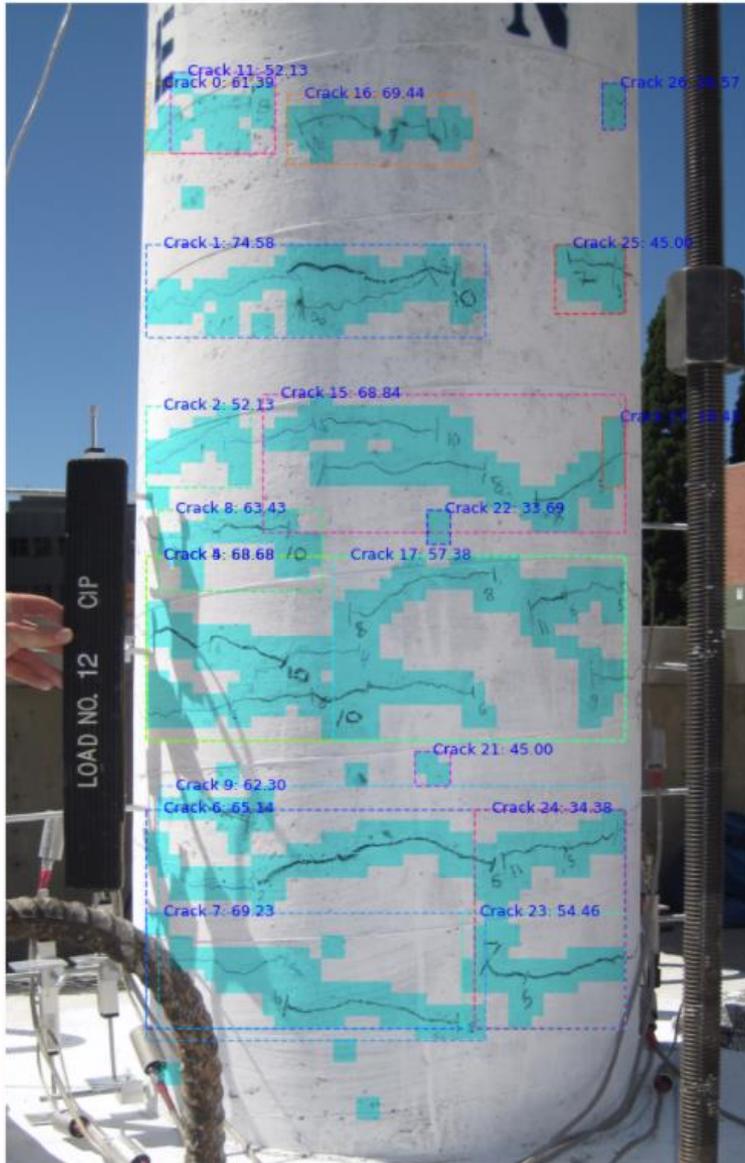
Project Work Plan

- Task 1: Literature review,
- Task 2: Selection of Bridge Elements for Computer Vision Condition Assessment,
- Task 3: Data Collection,
- Task 4: Definition of Damage Conditions Suitable for Computer Programming,
- Task 5: Development of Computer Vision Condition Assessment Tools,
- Task 6: Field Validation of Computer Vision Condition Assessment Tools,
- Task 7: Project deliverables.

Computer Vision Damage Assessment

Preliminary Damage Assessment - Results

Level 2



Number of Horizontal Cracks:

14

Number of Vertical Cracks:

6

Maximum Length of Spalled
Region(% of column
diameter of side dimension):

N/A

Number of exposed
Transverse (Horizontal) Bars:

N/A

Number of exposed
Logitudinal (Vertical) Bars:

N/A

Damage State:

Level 2

Bridge Evaluation:

Safe - Bridge can be opened

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Questions?

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