

PotholeVision

AUTOMATED POTHOLE DETECTION INTELLIGENCE AND GEOMAPPING



THE PROBLEM



Manual & Slow

Cities rely on citizen complaints — incomplete, slow, and geographically biased.



No Automation

Inspection teams cover only a fraction of lane miles each season.



Reactive & Costly

Damage is fixed only after failure — far more expensive than early intervention.

KEY IMPACT

- ✓ Minimize time spent on manual inspections
- ✓ Send crews directly to precise GPS locations
- ✓ Use AI-driven severity scoring to prioritize repairs
- ✓ Scalable across cities/lo

MODEL V3

90.6%

Pothole
Recall

88.2%

Accuracy

9.4%

Miss
Rate

PIPELINE DEPLOYED ON
REAL MINNEAPOLIS
STREET FOOTAGE



TEAM 3

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Driven by data. Built for cities.
Better roads. Safer communities.

DATA INPUT

RDD 2020

7-country road
Damage Dataset

Multi-national
coverage for robust
Training

Sovit Pothole

Dashcam-Based
Dataset

Vehicle -
Perspective
adaptation

YOLOv8 Pothole

Pothole
Segmentation

Strengthens
Positive Class in
Model v3

Neha Dataset

Independent
Benchmark

External
Validation

BIG DATA PIPELINE AND TECH STACK



1

INGEST

Load raw
video files



2

EXTRACT

Sample 1
frame/sec



3

CLASSIFY

CNN scores
each frame



4

LOCATE

Attach GPS
coordinates



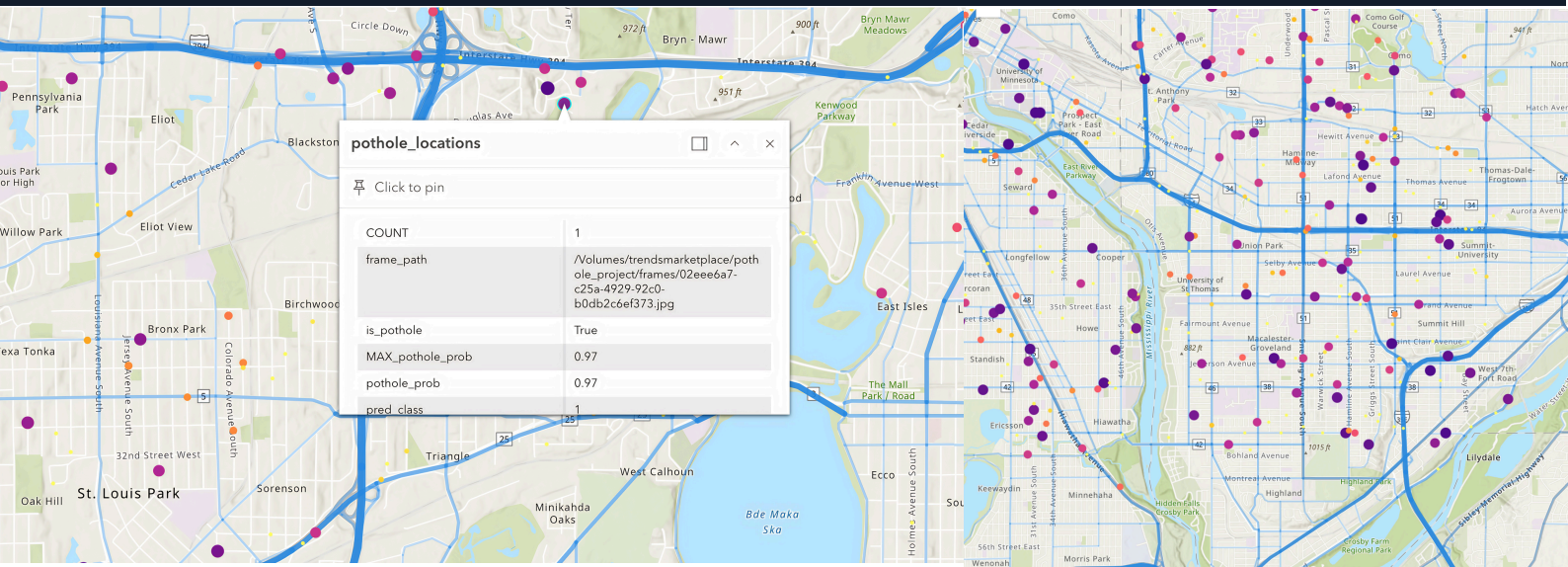
5

MAP

Plot on live
dashboard



LIVE GEOMAPPING DASHBOARD



See the Project. Explore the Code.

GitHub



SCAN ME

Map



SCAN ME