

PaveScan

by

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Problem Statement

Everyday all of us rely on roads to get to work, school or anywhere else really



Road hazards:

- Potholes
- Unclear road signs
- Non-functional traffic lights
- Fragments
- Debris



Vehicle Crashes:

- 10% increase in vehicle crashes reported by NHST



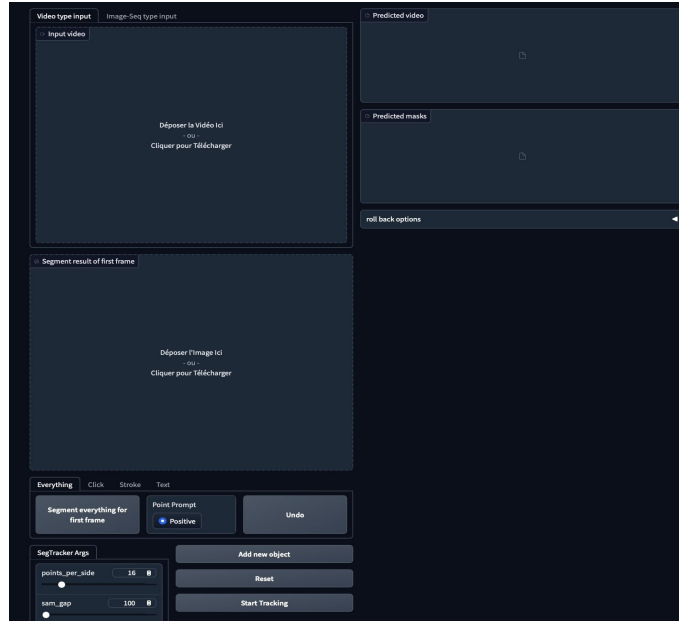
Road Examination:

- Costly
- Manual

Proposed Solution: PaveScan



Data Collection



Segment & Detect Hazards

test

- frame_0001.jpg
- frame_0002.jpg
- frame_0003.jpg
- frame_0004.jpg
- frame_0005.jpg
- frame_0006.jpg
- frame_0007.jpg
- frame_0008.inn

Output Format

Proposed Solution: PaveScan

Detection Prompt

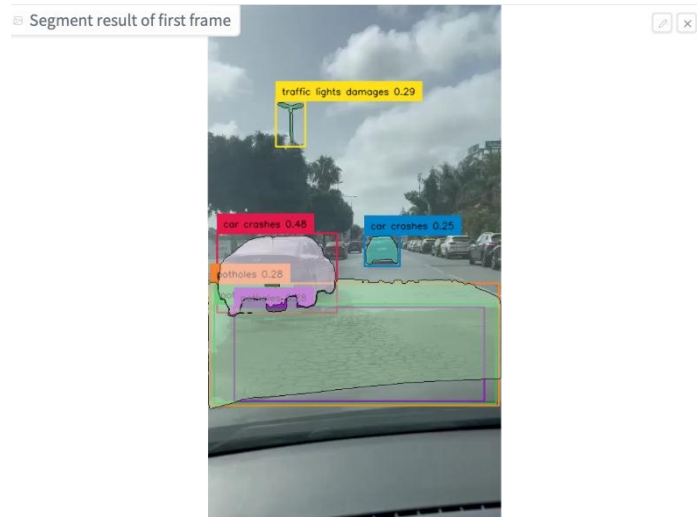
identify : car crashes, potholes, road hazards, traffic lights damages

Detect

Prompt



Input Video



Segment Result of the First Frame

Implementation



Target Client



Attach dashcams to garbage
collection trucks

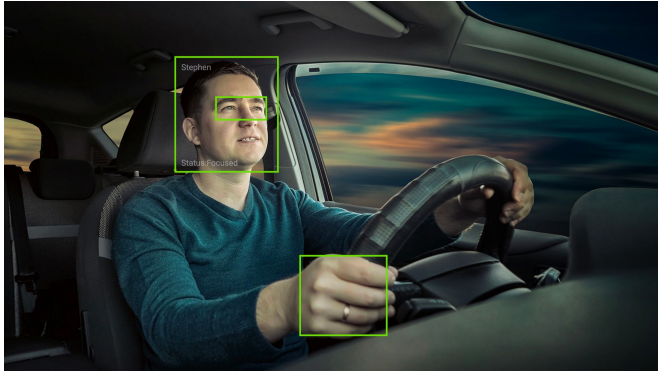


Report back in real time by sending
the location of the road hazard

Demo



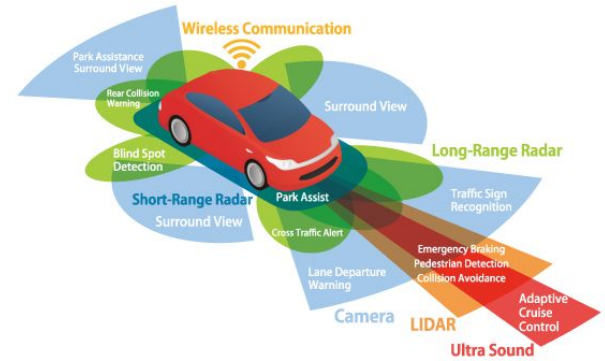
Future Work



Monitor driver vigilance



Identify the Severity of Hazards



Integrate the solution as a component in autonomous car systems