

AI Based Real Time Road Hazard Information Service



● Vision of Dareesoft

Dareesoft, since its establishment in 2020, has commercialized RiaaS and been recognized for its technological innovation through various startup support programs such as Baby Unicorn, TIPS, Scale-Up TIPS, IBK Changgong, and national projects. Dareesoft's **RiaaS**, has been successfully introduced to domestic local governments including Seoul Metropolitan City, and is now expanding globally.

● Unparalleled Data and Technological Competitiveness

We are securing customized data tailored to local road through high-quality data collected by AI Road Analyzer device and accumulated AI analysis know-how through demonstration projects/POCs.



● Major Customers

From local governments to businesses, customers from various industries have chosen RiaaS.



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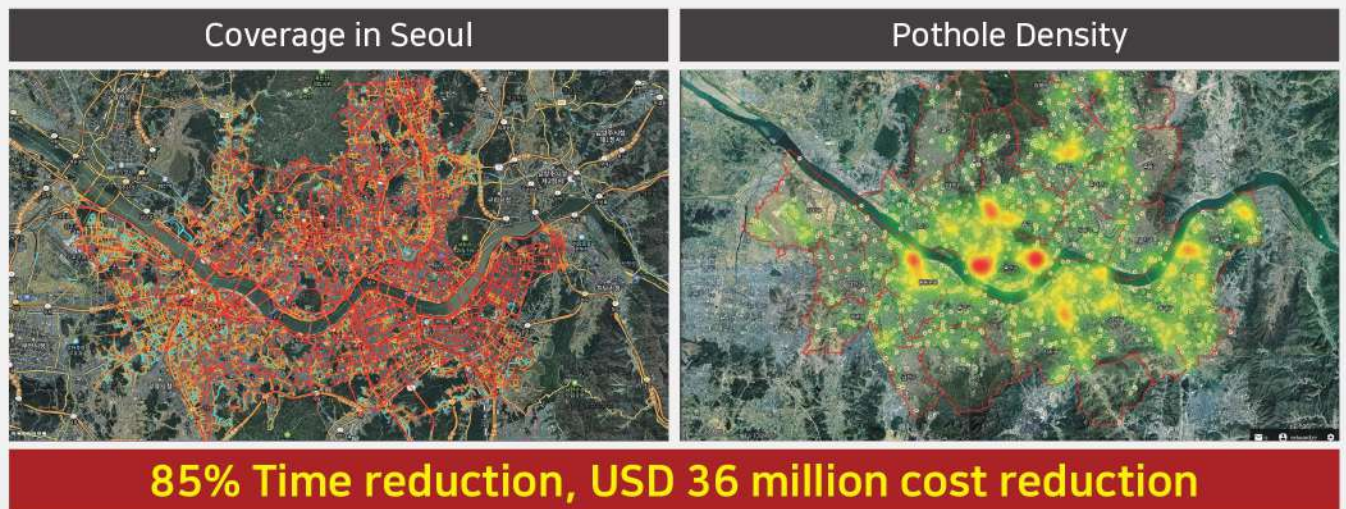
● Applications ● ●

RiaaS can be applied to a variety of circumstances. Current applications include road hazard & distresses detection including road kills and debris, asset management, autonomous driving and autonomous driving applications.



● Major Case Studies – Seoul Pothole Detection ● ●

300 units of Daresoft's AI road analyzer devices are installed on taxis and public buses in Seoul, detecting and reporting potholes in the city 24/7, 365 days a year.



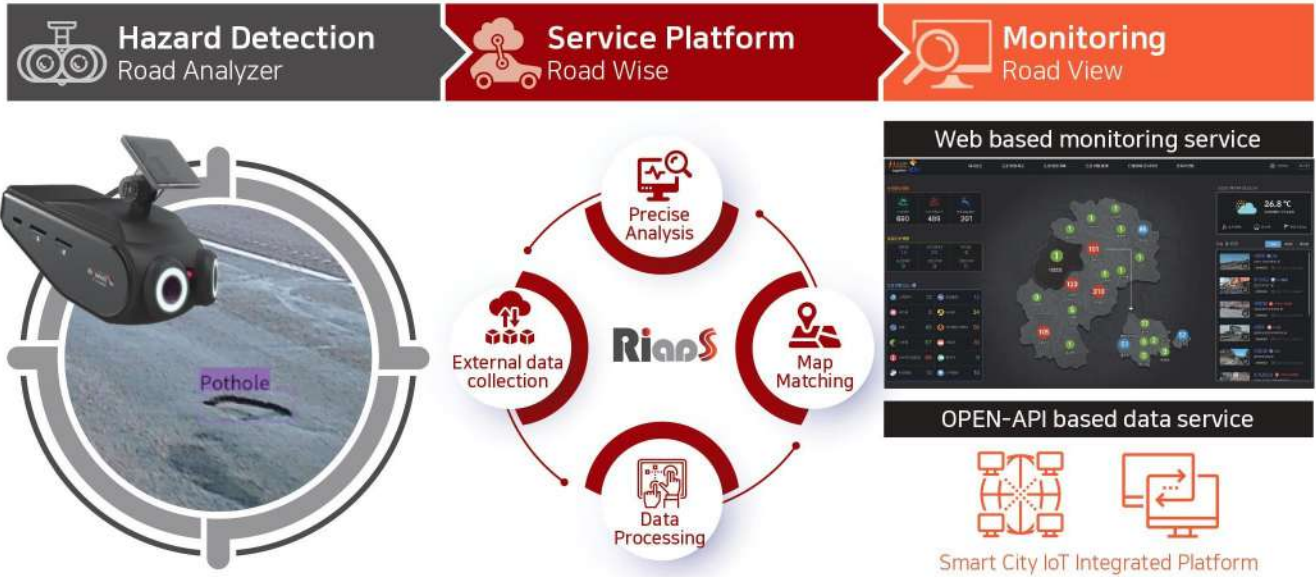
● Project Details ● ●

We are developing solutions and accumulating know-how based on various projects and continuous R&D

Location	Region	Project
	Seoul, Korea	Vision based automatic pothole detection and analysis
	Gimcheon, Korea	Gimcheon Smart town; Smart Road Maintenance
	Wonju, Korea	ITS innovation; AI Highway Risk Management System
	Alberta, Canada	Automize road maintenance and reporting system
	California, USA	RiaaS for automation of road maintenance and PCI reporting
	Bangalulu, India	Pothole, debris, broken road asset detection
	Oitta, Japan	Replacing manual detection with RiaaS
	Dubai, UAE	RiaaS + delivery motorcycle counting

● Real Time Road Hazard Information Service

End to End service, from collecting to sharing road hazard information within 1 second.



One can enhance and strengthen the detection model autonomously through a One Stop Solution where detection, transmission, analysis, and visualization of road hazards are automatically implemented.



● Benefits





● Road Analyzer ● ● ●

ARA is **the world's only road analysis device** detecting road hazards.



ARA 20

Powerful ultra-lightweight AI model
Detects over 12 kinds of road hazards
Transmits data to a cloud platform.

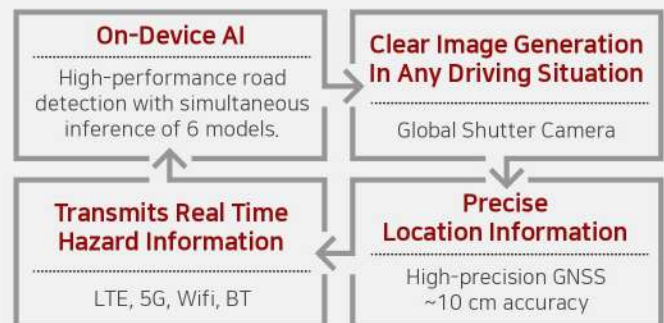
ARA 30

8 times faster AI Model than ARA 20
Detects over 20 kinds road hazard
and infrastructure information with
5 channel camera.

✔ Functions

1. > Automatic On/Off & auto detection
2. > Installed inside vehicle (Black box type)
3. > Remote control/ Remote update (OTA)

✔ Key Features



✔ Detected Hazards



Road Wise

Through secondary processing of hazard information transmitted from ARA, precision analysis, size measurement, deduplication, and de-identification are processed on a single platform.

Secondary Precision Analysis

Improving data reliability through secondary processing



Tire Marks



Dark-Colored Trash

Data Anonymization

De-identification for privacy protection of collected data



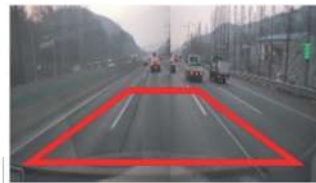
Human Faces



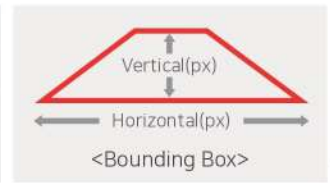
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Size Measurement

Algorithm applied for size measurement of hazards



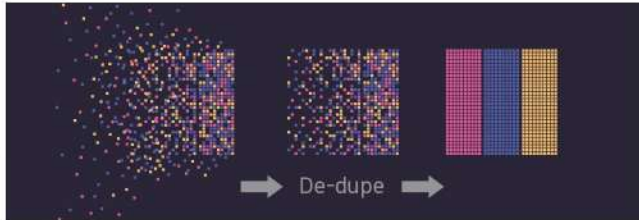
Forward Detection



Inference of Risk Area

Deduplication

Algorithm for deduplication of road hazards detected in the same location



Data Integration

Integration of various external data sources



Road View

Provides an intuitive UI/UX for monitoring the the road hazards and a field response service app that enables the road management for the Road maintenance departments.

Web based UI/UX



Road hazard information by administrative area/road/time series



Graph-based statistics and visualization



GIS based hazard information

Field Response App



Hazard picture and location