Drone-based infrastructure damage detection AI

AI detects cracks in concrete and rust in steel from images of infrastructure structures taken by drones

Customer Experience Value Creation

ドローン撮影画像からAIによりヒビ・サビを検出
（AI detects cracks and rust from drone images）

ヒビ検出 （Crack detection results）

ヒビ
検出AI
Crack detection AI

サビ検出 （Rust detection results）

サビ
検出AI
Rust detection AI

///Technical Issue

While infrastructure structures such as bridges are aging, conventional methods of inspections are carried out using heavy machinery and human vision, which requires a large amount of cost and time.

///Research Goal

In addition to photographing infrastructure structures with drones, inspection time is reduced by detecting cracks and rust using AI.

---Technology

AI is used to detect cracks in concrete and rust in steel in images and mark them.

---Novelty

To detect cracks in concrete, we have developed three detection AIs: structural detection, joint detection, and crack detection. By combining these, highly accurate detection is possible. （Patent pending）

---Applicable Business

In the field of infrastructure inspection, it can be used to inspect public infrastructure structures such as bridges and ports. In addition, it is used in the inspection of structures such as facilities in factories and plants of private companies.(Trial launch: October 2024, Commercial launch: April 2025)