

Kudan Provides Visual SLAM Technology for Autonomous Drone Project Enhancing Safety Measures for a Major European Railway Operator

Kudan has primarily focused on projects utilizing autonomous mobile robots and digital twin technologies in ground environments such as factories, warehouses, offices, and infrastructure facilities. However, since the previous fiscal year, the commercialization of drone products has advanced, and we have observed an increase in projects beyond traditional applications, such as those in the [railway](#) and maritime sectors. These developments demonstrate the steady expansion of our technology's applicability to complex environments, driven by advancements in our capabilities and the accumulation of implementation experience.

Against this backdrop, Kudan is pleased to announce that our Visual SLAM technology has been adopted for a demonstration project involving autonomous drones designed to detect trespassers and enhance security for a major European railway operator. This project addresses challenges posed by environments where GPS/GNSS signals are unavailable, enabling highly accurate localization and contributing to improved railway infrastructure safety and operational cost efficiency.

Safety and operational costs have long been critical issues in railway infrastructure, with incidents and trespassing presenting persistent challenges. To tackle these issues, this project utilizes autonomous drones for railway patrols and emergency response, aiming to enhance security and optimize operational efficiency. Notably, Kudan's Visual SLAM technology ensures stable drone operations even in environments where GPS/GNSS signals are weak or inaccessible.

The key reasons Kudan's technology was selected for this project include:

- **High-Precision Localization:** Reliable and accurate position data even in areas with unstable or unavailable GPS/GNSS signals.
- **Operational Efficiency and Cost Reduction:** Enhanced drone stability and reliability, leading to lower operational costs.
- **Scalability:** Supports the deployment of multiple drones by enabling accurate map and position data sharing, facilitating large-scale implementations.

In the initial phase of the project, evaluation experiments leveraging Kudan's technology demonstrated exceptional performance. Currently, further demonstration experiments are underway in more complex environments as the project progresses toward commercialization.

Kudan remains committed to expanding the global adoption of its autonomous mobility and digital twin-related technologies and solutions across diverse application domains, driving the realization of these innovations on a societal scale.

About Kudan Inc.

Kudan is a deep tech research and development company specializing in algorithms for artificial perception (AP). As a complement to artificial intelligence (AI), AP functions allow machines to develop autonomy. Currently, Kudan is licensing its technology for next-generation solution areas such as digital twin, robotics and autonomous driving.

For more information, please refer to Kudan's website at <https://www.kudan.io/>.

■ Company Details

Name: Kudan Inc.

Securities Code: 4425 (TSE Growth)

Representative: CEO Daiu Ko

■ Contact Information

For more details, please contact us from [here](#).