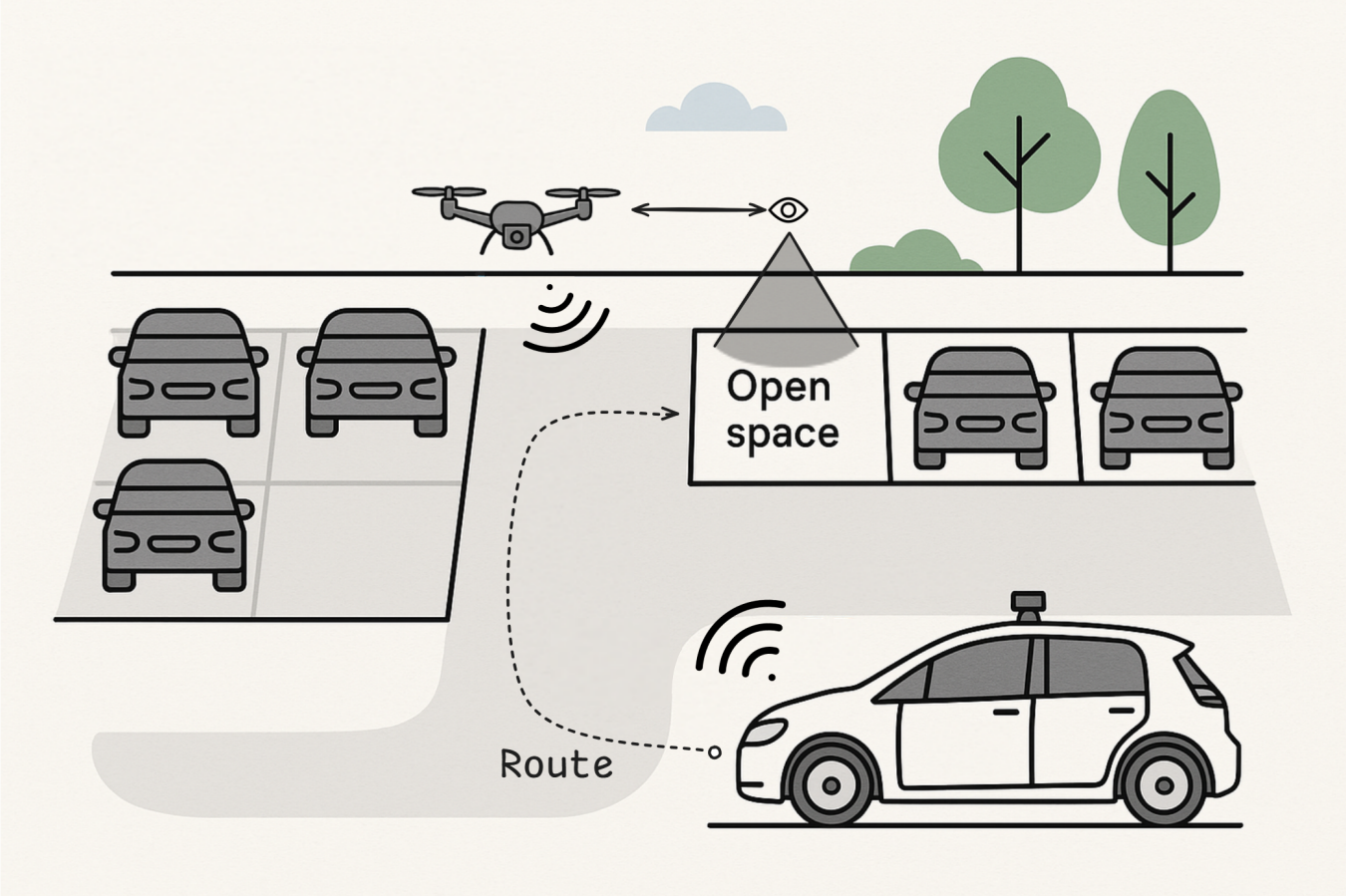
T.R.A.L.A.L.E.R.O (Tatical Recon and Aerial Logistics for Autonomous Localization Engagement and Routing Operations)

Objective

This project involves establishing a communication link between a drone and an autonomous vehicle to assist in identifying and navigating to an available parking spot in an open-air parking lot. The drone would act as an aerial scout, scanning the area from above to detect free spaces and providing real-time data to the autonomous vehicle. The vehicle would then use this information to calculate the optimal route and maneuver to the selected spot.

The initial phase would be conducted in a simulated environment to test and validate the system's core functionalities, including object detection, path planning, and inter-device communication. If successful, the project would transition to real-world testing, which would require a functional drone with appropriate sensors and communication modules, as well as a development-grade autonomous vehicle platform.



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