

# Core Al Software Stack for Crewed and Uncrewed Ground Vehicles

FieldAl Federal's Edge Autonomy Stack gives unparalleled autonomy capabilities to tactical ground vehicles, enabling safe and reliable deployment in the most challenging environments across your operational domain. Our unique Field Foundation Models enable deployed vehicles to excel at dense obstacle avoidance, using real-time 3D mapping and semantic perception to understand their surroundings, delivering mission confidence at the field's edge.

#### FIELD FOUNDATION MODELS

A breakthrough for robotics autonomy, our risk-aware architecture no longer requires manual programming. We developed this new class of physics-first Field Foundation Models from the ground up so that FieldAl equipped vehicles can safely and dynamically adapt to new and unexpected conditions while executing complex tasks reliably in unstructured environments without prior maps, GPS, or predefined paths. Unlike conventional vision or language models retrofitted for robotics, FFMs are designed to grapple with uncertainty, risk, and the physical constraints of the real world even when managing scenarios that the system has not been trained on.



2024 DARPA RACER Top Performer Experiment 2

> 2020 DARPA Subterranean Challenge Winner Urban Circuit





## ANY ENVIRONMENT

### Handles unknown, dynamic, and unpredictable real-world conditions

FieldAl's autonomy software enables safe and reliable robot behaviors when managing scenarios that systems have not been trained on, allowing them to navigate dynamic, unstructured environments without prior maps, GPS, or predefined paths. FieldAl systems have been tested and deployed in over 150 sites globally across diverse and complex real-world environments, day and night.

#### **ANY PLATFORM**

## Works with legged, wheeled, tracked, and aerial vehicles

FieldAl's autonomy software supports a broad suite of robot embodiments, allowing you to leverage our powerful navigation and obstacle avoidance algorithms on the platforms you've specifically chosen for the task at hand. From rugged all-terrain vehicles to nimble legged robots, your hardware can greatly expand its capabilities with our system.

#### **ANY SENSOR**

# Works with all major sensors

The FieldAl brain allows unmanned vehicles to autonomously gather critical information in your most challenging, unmapped, and GPS-denied environments. Our autonomy software stack supports a diverse suite of sensors, including high-resolution cameras, LWIR, RADAR and LiDAR, which capture rich visual and spatial data of your vehicles' surroundings. As a result, FieldAl-deployed robots create a clear understanding of your environment, allowing you to make informed decisions that better support your mission.

