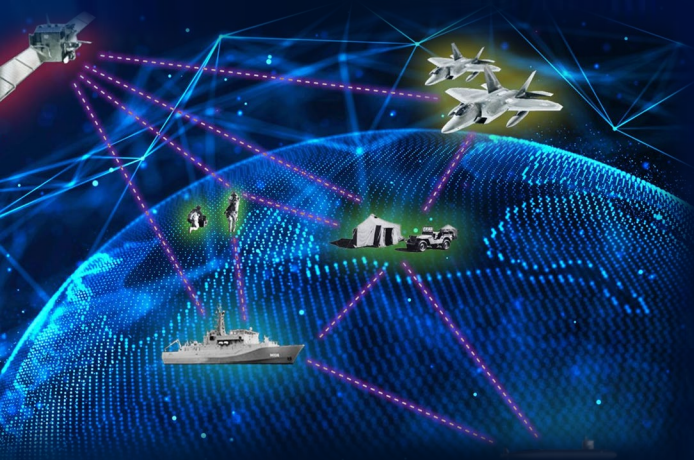




Collins Aerospace

An **RTX** Business

Collins Aerospace, a subsidiary of RTX Corporation, is a global leader in aerospace and defense technology, delivering advanced systems for commercial aviation, military operations, and space exploration. Its expertise spans key domains such as avionics, structures, cabin experience, electrified aircraft systems, connected battlespace technologies, and digital innovation. Through these integrated capabilities, the company develops end-to-end solutions that enhance efficiency, safety, and sustainability – supporting the aviation experience from cockpit to cabin while helping shape the future of flight.



RF-Informed Ground-Asset Optimization with UAS Support for Electromagnetic Operations

This project builds on fast, terrain-aware RF propagation modeling to determine optimal placement of ground-based sensors and jammers against enemy threats, evaluating large geographic areas to identify locations that maximize signal advantage while meeting siting, coverage, and deployment constraints. It then extends to generating pre-planned flight routes that reinforce this coverage from the air, balancing detection avoidance with jamming effectiveness under flight-dynamics and airspace considerations.

Keyword: Machine Learning, Asset Placement Optimization, Flight Route Planning, Electronic Warfare, Electromagnetic Operations

Tools/Skills: Python, Optimization, AI/ML, RF Propagation & Terrain Analysis

Citizenship Status: US Citizenship Required