# AI Takes Autonomous Control To Fly U-2 Spy Plane Mission



The "military/industrial complex" is controlled by Technocrats who seek to use Artificial Intelligence for making war. From "super-soldiers" who are body-hacked, to weaponized robots, drones and mission-driven fighters and bombers, no area is left untouched. ⮞ TN Editor

*On December 15, the United States Air Force successfully flew an AI copilot on a U-2 spy plane in California, marking the first time AI has controlled a U.S. military system. In this* Popular Mechanics *exclusive,* **Dr. Will Roper***, the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics, reveals how he and his team made history.*

For *Star Wars* fans, an X-Wing fighter isn't complete without R2-D2. Whether you need to fire up converters, increase power, or fix a broken stabilizer, that trusty droid, full of lively beeps and squeaks, is the ultimate copilot.

Teaming artificial intelligence (AI) with pilots is no longer just a matter for science fiction or blockbuster movies. On Tuesday, December 15, the

Air Force successfully flew an AI copilot on a U-2 spy plane in California: the first time AI has controlled a U.S. military system.

Completing over a million training runs prior, the flight was a small step for the computerized copilot, but it's a giant leap for "computerkind" in future military operations.

The U.S. military has historically struggled developing digital capabilities. It's hard to believe difficult-to-code computers and hard-to-access data—much less AI—held back the world's most lethal hardware not so long ago in an Air Force not far, far away.

But starting three years ago, the Air Force took its own giant leap toward the digital age. Finally cracking the code on military software, we built the Pentagon's first commercially-inspired development teams, coding clouds, and even a combat internet that downed a cruise missile at blistering machine speeds. But our recent AI demo is one for military record books and science fiction fans alike.

With call sign *ARTUμ*, we trained μZero—a world-leading computer program that dominates chess, Go, and even video games without prior knowledge of their rules—to operate a U-2 spy plane. Though lacking those lively beeps and squeaks, ARTUμ surpassed its motion picture namesake in one distinctive feature: *it* was the mission commander, the final decision authority on the human-machine team. And given the high stakes of global AI, surpassing science fiction must become our military norm.

Our demo flew a reconnaissance mission during a simulated missile strike at Beale Air Force Base on Tuesday. ARTUμ searched for enemy launchers while our pilot searched for threatening aircraft, both sharing the U-2's radar. With no pilot override, ARTUμ made final calls on devoting the radar to missile hunting versus self-protection. Luke Skywalker certainly never took such orders from his X-Wing sidekick!

The fact ARTUμ was in command was less about any particular mission than how completely our military must embrace AI to maintain the battlefield decision advantage. Unlike Han Solo's "never-tell-me-the-odds" snub of C-3PO's asteroid field survival rate (approximately 3,720

to 1), our warfighters need to know the odds in dizzyingly-complex combat scenarios. Teaming with trusted AI across all facets of conflict—even occasionally putting *it* in charge—could tip those odds in our favor.

But to trust AI, software design is key. Like a breaker box for code, the U-2 gave ARTUµ complete radar control while "switching off" access to other subsystems. Had the scenario been navigating an asteroid field—or more likely field of enemy radars—those "on-off" switches could adjust. The design allows operators to choose what AI *won't* do to accept the operational risk of what it *will*. Creating this software breaker box—instead of Pandora's—has been an Air Force journey of more than a few parsecs.

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