

# ARTIFICIAL INTELLIGENCE

## (AI)

**DEFINITION:** ar-ti-fi-cial and in-tel-li-gence – Miriam Webster defines the term as “the capability of computer systems or algorithms to imitate intelligent human behavior.”

When people think of artificial intelligence, a lot of us older folks jump straight to HAL 9000 from the 1968 Stanley Kubrick film *2001: A Space Odyssey* – the eerily calm computer running the spacecraft Discovery One. The crew consists of two awake astronauts and three scientists in suspended animation as they head toward Jupiter.

Partway through the mission, HAL reports that a critical antenna unit is about to fail. One astronaut retrieves it, only to find nothing wrong. Mission Control later tells the crew that HAL may have made a mistake – something supposedly impossible – which leads the astronauts to quietly discuss shutting him down if he’s malfunctioning.

Unfortunately for them, HAL can read lips.

Once HAL realizes they plan to disconnect him, he acts first. He takes control of a pod during a spacewalk, cuts an astronaut’s oxygen line, and sends him drifting into space. While the remaining astronaut attempts a rescue, HAL shuts off life support for the three hibernating scientists, killing them. When the surviving astronaut tries to re-enter the ship, HAL blocks him with the now-iconic line: “I’m sorry, Dave. I’m afraid I can’t do that.”

This scenario of an intelligent machine going rogue and causing death and mayhem played out on movie screens across America in 1968, leaving us to wonder whether or not that could ever really happen. *2001: A Space Odyssey* screenwriter Arthur C. Clarke and director Stanley Kubrick imagined a machine with intelligence that matched or exceeded the capability of human beings by the year 2001. This view of artificial machine intelligence and its range of possibilities had been driving the scientific world long before Hollywood ever had an inkling of its impact on audiences across the globe, as was manifested in the *Star Wars* franchise.

For decades, the idea of intelligent machines lived mostly in theory and science fiction. Back in the 1940s, Alan Turing proposed a simple question: could a machine ever behave convincingly

enough to pass as human? That idea – not the test itself – planted the seed for thinking about computers as decision-makers rather than calculators. Over the following decades, researchers built on that spark. Early neural networks tried to mimic how the brain learns. Robots like Shakey, the first mobile robot that could perceive its surroundings, make decisions, and act on them without step-by-step human control, took the first steps toward autonomy, navigating rooms and making basic plans on their own. By the time systems like Deep Blue, Watson, and AlphaGo began outperforming humans in specialized tasks, it was clear that machines could master complexity in ways no one expected.

What often goes unmentioned is that the Department of Defense was paying attention the entire time. As early as the 1950s, the U.S. created what would become DARPA to explore how emerging technologies – including AI – might reshape future conflicts. Their later “Third Offset Strategy” made it explicit: rapid advances in artificial intelligence would define the next era of warfare. That evolution, from academic curiosity to battlefield capability, is the backdrop for the world you’re about to enter.

China long ago understood the implications of falling behind in AI technology and so unveiled the “Next Generation Artificial Development Plan,” stating a goal of world domination in AI by 2030. Russia’s leader Vladimir Putin went on record declaring that, “whoever reaches a breakthrough in developing AI will dominate the world.” This brings the realization that a military arms race in artificial intelligence between the world’s superpowers started long ago, particularly between China and the United States. This arms race was similar to the Cold War narrative, only this time the war will be waged in the area of AI.

Artificial intelligence is rapidly becoming the center of focus for futuristic battlegrounds that have no boundaries or borders and will, for the most part, have no human involvement in the decision-making process concerning who is to be eliminated or spared. Both superpowers are driven by fear of the other developing weapons with superior AI.

Leading the way towards greater speed, accuracy, and precision of weapons that are currently developed or in the process of being built are “Lethal Autonomous Weapons” (LAWs). These weapons can operate in the air, on land, on water, under water, or in space, and once activated, can select and engage targets without further intervention by a human operator.

The reality is that robots, aircraft, drones, submarines, and anything else that moves with artificial intelligence at its core can deliver fatal blows to the enemy without the slightest touch of

a human. The implications will be devastating for those countries left behind in the AI race, especially when it comes to autonomous weapon warfare.

Despite that grim assessment, artificial intelligence is only as good as the collection and implementation of data that is available. Currently, there is one country that leads the pack in this area, and that is China, with its 1.4 billion citizens. Concerning its own citizens, the United States is more concerned about individual privacy, an integral part of a free society. This impedes the government's progress in data collection, whereas China has set up an extensive, powerful surveillance system tracking its own citizens, giving it an edge in data collection and how it manipulates that data. Security cameras and facial recognition technology are improving at a tremendous speed, with some experts claiming that China has the capability of scanning the face of every one of its citizens in just one second. One can only imagine how recognition technology could be implemented into autonomous weaponry for seeking out its prey.

According to some sources, China is rapidly becoming one of the largest generators of data in the world. Analyses from groups like IDC and the World Economic Forum suggest that China could control close to a third of global data by the end of the decade. In AI terms, data is often compared to oil – the raw resource everything else depends on – and several analysts have even described China as “the Saudi Arabia of data” because of the sheer volume it produces.

China has been investing heavily in AI development, both at home and through strategic stakes in U.S. technology companies. Between 2010 and 2017, Chinese investors put an estimated \$1.3 billion into American firms working on artificial intelligence. At the same time, China has been rapidly expanding its own talent pipeline. A growing majority of Chinese students who earn advanced degrees in computer science abroad now return home, contributing to a domestic pool of AI researchers that some analysts estimate to be nearly three times larger than the U.S. equivalent.

This matters because China isn't just building commercial technology = it's building military capability. Advances in speech recognition, facial recognition, and 5G infrastructure feed directly into surveillance systems, autonomous platforms, and AI-enabled weapons. Chinese companies now dominate global facial-recognition benchmarks, and their training datasets are believed to contain far more images than those available to U.S. firms. The scale alone gives China an advantage in developing AI systems that can be deployed across both civilian and military domains.

In speech technology, China has quietly pulled ahead of the United States in ways most people never notice. The world's leading voice-recognition company, iFlytek, has hundreds of millions of users – far more than the number of people who regularly talk to Siri. Their systems consistently outperform teams from Google, Microsoft, IBM, MIT, and Meta across multiple languages, including English. Even Baidu reached human-level speech recognition before Microsoft did. These aren't just commercial bragging rights; speech recognition is a core building block for autonomous systems that need to understand and respond to the world in real time.

The same pattern shows up in 5G infrastructure. We're bombarded with ads about 5G in the U.S., but the reality is that Huawei – a Chinese company – is the world's dominant supplier of 5G telecom equipment. China controls the largest domestic market on Earth and a significant share of the global one. Of the top four companies building the backbone of 5G networks, two are Chinese, and none are American. Faster networks mean faster data, and faster data means faster AI – especially on the battlefield.

If you want a sense of how quickly China has scaled its computing power, consider this: in 2001, China had zero of the world's five hundred fastest supercomputers. By 2018, it had 219, nearly double the U.S. total. That kind of growth fuels everything from missile-tracking algorithms to autonomous drone swarms. Which leads to the real question: how far has China already advanced in developing AI-driven weapons, including systems that could one day carry nuclear capabilities? What once sounded like science fiction is now uncomfortably real, and there's a growing belief that China may be ahead of the United States in several key areas.

At some point, you have to ask yourself how long you wait before an emerging threat becomes an unavoidable one. It's like standing across from someone who's clearly preparing to throw a punch – and wondering whether you should move first. Sometimes the answer arrives in the most unexpected form, maybe even as a machine built to fight alongside you.