

Elon Musk: Artificial Intelligence Is Like 'Summoning a Demon'

Elon Musk has built a reputation as one of this generation's most visionary inventors and entrepreneurs. But he is now warning that artificial intelligence could grow to become like "summoning the demon."

The founder of the Tesla car company and rocket-maker Space X fears that the technology could someday be more harmful than nuclear weapons.

Musk is so worried that he is investing in AI companies—not to make money—but to keep an eye on the technology in case it gets out of hand.

He elaborated on this theme last week in remarks at the Massachusetts Institute of Technology's AeroAstro Centennial Symposium. Musk, 43, described artificial intelligence as mankind's "biggest existential threat."

"I think we should be very careful about artificial intelligence. If I had to guess at what our biggest existential threat is, it's probably that. So we need to be very careful with artificial intelligence," Musk told his audience, according to a report in London's *Daily Mail*. "I'm increasingly inclined to think that there should be some regulatory oversight, maybe at the national and international level, just to make sure that we don't do something very foolish.

"With artificial intelligence we're summoning the demon. You know those stories where there's the guy with the pentagram, and the holy water, and ... he's sure he can control the demon? Doesn't work out."

In August the Canadian-American business magnate and inventor, who was born in South Africa, warned that AI could do more harm to the human race than nuclear weapons.

Musk, who earned his first fortune as a co-founder of PayPal, has previously claimed that a horrific '*Terminator*-like' scenario could be created from research into artificial intelligence.

In March, Musk made an investment in San Francisco-based AI group Vicarious, along with Facebook founder Mark Zuckerberg and actor Ashton Kutcher.

Vicarious' ultimate aim is to build a "computer that thinks like a person ... except it doesn't have to eat or sleep," according to the company's co-founder Scott Phoenix.

In an interview with CNBC, Musk said, "I think there is potentially a dangerous outcome there. There have been movies about this, you know, like *Terminator*. There are some scary outcomes. And we should try to make sure the outcomes are good, not bad."

Vicarious is currently attempting to build a program that mimics the brain's neocortex. The neocortex is the top layer of the cerebral hemispheres in the brain of mammals. It is about three millimeters thick and has six layers, each involved with various functions. These include sensory perception, spatial reasoning, conscious thought and language in humans.

In October 2013 the company announced it had developed an algorithm that "reliably" solves modern CAPTCHAs—the world's most widely used test of a machine's ability to act human.

CAPTCHAs are used when filling in forms, for example, to make sure it's not being completed by a bot. This prevents people programming computers to buy a bulk load of gig tickets, for example.

As well as Vicarious, Musk was early investor in AI firm DeepMind, which earlier this year was acquired by Google for \$678 million.

Renowned physicist Stephen Hawking also has warned that humanity faces an uncertain future as technology learns to think for itself and adapt to its environment.

Earlier this year, the renowned physicist discussed Johnny Depp's latest film, *Transcendence*, which delves into a world where computers can surpass the abilities of humans.

Hawking said dismissing the film as science fiction could be the "worst mistake in history."