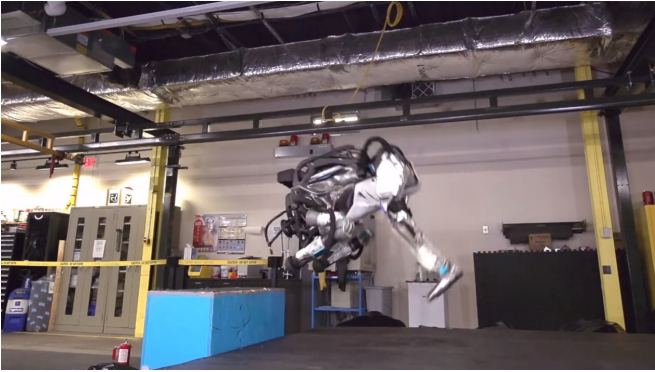


# Wait, did I just see Atlas robot do a backflip?

18 November 2017, by Nancy Owano



(Tech Xplore)—Boston Dynamics is now part of SoftBank and their family of robots is getting lots of attention as the year draws to an end—from gee-whiz reactions to their recent showing of a bright-yellow plate display on SpotMini to outright gasps this week over a video showing a newer Atlas.

Some even wondered if it was fake news. And an oh-so-smart reader comment on *Wired* said man in a robot suit, oldest trick in the book.

The global reactions to the Atlas video all suggest this is an unexpected biped wonder. We knew Atlas had progressed, could walk indoors and out, and looked tough and strong enough to weather any rescue operation or trek in danger's way—but now this video came as a surprise.

The new Atlas does backflips (no, really). And with a gymnast's flair.

Jay Bennett in *Popular Mechanics*: "After adroitly jumping over some obstacle boxes, the [humanoid](#) robot leaps up onto a box that looks to be about 3 feet tall. Then it does a 180 degree spin, plants the landing, and finally proceeds to do a backflip off

the platform and land on a gymnastics mat. 10 out of 10."

*PCMag's* UK-based editor and news reporter, Matthew Humphries: "What I noticed from watching the video above is how human-like the body movement is. ... If Boston Dynamics can slim down the frame of Atlas and fit it in typical human clothing, it won't be too much longer before it's hard to tell the difference between a human and robot [body](#)."

Boston Dynamics' November 16 video had no details in the video notes section but the [video](#) itself clearly indicates progress in this humanoid robot.

Atlas is so agile now; it bends its knees and jumps from platform to platform to block and tops the act off with a gasp-inducing back-flip.

Never thought that I will see something like that in my lifetime! said one reader comment.

*Wired* thought up the compliment, "[full](#)-tilt insane." Atlas has been making incremental improvements for a while. "Over the years, it's grown not only more backflippy but lighter and more dextrous and less prone to fall on its face," said Matt Simon in *Wired*.

David Szondy in *New Atlas* flipped us back in detail with advancements seen in Atlas—as in 2015 when Atlas, "developed with the help of DARPA and showcased at the 2015 DARPA Robotics Challenge, impressed onlookers simply because it could walk and climb stairs without a tether or crashing to the floor every other step." Additional feats: balancing on one leg, moving outdoors under its own power.

With new hydraulic systems and internal sensors Atlas "developed a remarkable sense of [balance](#)," said Szondy, recovering if a human tried to knock it down.

In earlier days of biped robots, it was impressive to see them noisily lumber along in stepping forward, like crude machine parts with humanoid limbs. Then they impressed us as robots were engineered to bend their knees as humans do on the move. Simon reminded readers that it is "extremely difficult" to do what you see Atlas doing—balancing the upper body through it all, with two machine legs.

*MIT Technology Review's* "The Download" would agree. "Anyone who's tried to do a backflip will know that it's not easy, especially the landing. It requires dexterity, poise, and balance—all things that have typically been lacking in [humanoid robots](#). But Boston Dynamics has shown that, while it might not be easy and certainly seemed a distant hope two years ago, it's now perfectly possible for a [robot](#) to display such [skills](#)." "The Download," posted by Jamie Condliffe on Friday, also said, "That has profound implications for what robots might be able to do in the future."

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