

03

FOR ROS
DEVELOPERS

ROS MONDAY

BY THE CONSTRUCT



I REALLY THINK THAT CURRENT
ROBOTS CANNOT DO USEFUL TASKS
IN THE CRISIS

CAN ROBOTS HELP DURING CORONAVIRUS CRISIS?



The
Construct
For ROS Developers

CAN ROBOTS HELP DURING CORONAVIRUS CRISIS?

by Ricardo Téllez

Everyone is thinking about a way to help in this coronavirus crisis, and that is what I love of humankind.

Roboticists, we are no less. We also want to do our part in this crisis and help from the position that we know, that is, using robots to help in the crisis (either in the hardware or software part).

On [my last ROS live class](#) I was asked by some students whether I thought robots can help in the crisis. And my answer was no.

I really think that current robots cannot do useful tasks in the crisis.

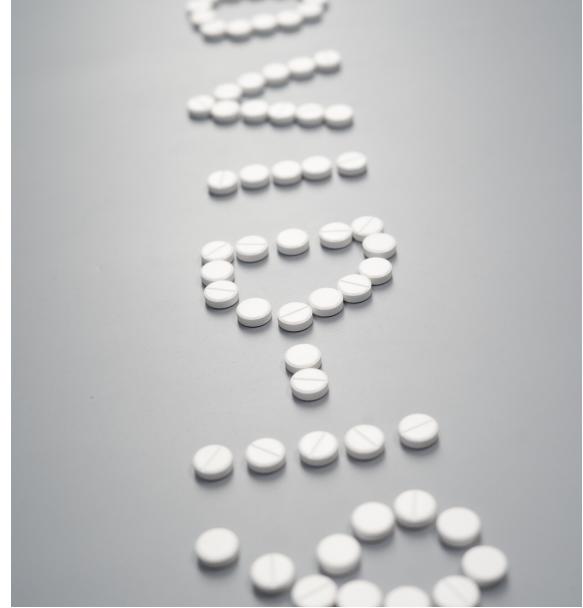
First of all, if you are thinking about a robot that helps the doctor with the patient, changes the sheets of beds, gives lunch to the ill ones, that is a big no. We are very far from that.

On the other side, if what you are thinking is about robots that can help in very small and concrete tasks, then the answer is a maybe... but still not convinced.

For instance, there are robots that can be used as **telepresence robots**. In theory, those telepresence can help Doctors review patients from a distance, reducing the exposure of the Doctors and allowing far Doctors to help in overloaded places. In theory that should work with any of the telepresence robots that do exist. However, still to see a real situation where this is working. For example, [this article](#) by IEEE Spectrum talks about using robots for telepresence, but actually shows no real execution (even the picture is an actors picture). That is why I suspect that, even if they have the proof of concept done (I don't doubt about that), the real thing is something much more complex, and hence, it is at present still not working.

Another way is **delivery and transportation** tasks inside the hospital. Several companies working on it already and many [press releases](#), but the complexity of the task goes beyond navigation. The robot has to be able to move on elevators, closed doors and narrow spaces with people all around.

Another way is **disinfection**. What is the advantage of [that approach](#)... I don't know since I'm not an expert of that task. However, to my limited vision, the requirement of having a person controlling the robot makes the task either more complex or converts the robot in just a tool.



So, I would define a quick test to see if a robot is actually helping:

1. Does the robot need the presence of other humans during its task performance?
2. Is the robot working autonomously for a certain amount of hours in a row?

If the answers are no, and yes, then we may be into a real robot that is helping. Otherwise the robot is just a tool or a press release. Unfortunately, based on my experience we are closer to the later. I do believe that all those companies have achieved the proof of concept, yes. I do not believe any of those robots are practical in daily life of the hospitals.

As roboticists, we must take care of what we promise. We must be conscious about the reception of news about robotics by journalists and the audience. So we must not overpromise because we will be creating a false expectations about the real situation.

Please, correct me if I'm wrong. I'll be very happy to hear of successful cases where robots are really helping in the COVID crisis. If you sent me those cases, I'll change my opinion and promote them in my networks.

Stay safe.