

## Robots: New Humans of the Digital Era



If we talk about Robots or Robotics, it is not possible to find a single person who doesn't know about it. It is one of the trending technologies, especially the implementation of this technology amaze the people. Almost all the industries are integrating Robots as they work on a set of instructions that can be programmed by the user. This technology can replace almost all the operational difficulties that the industries are facing. Soon people will live in the new Robotic Era which is being prepared by some of the geniuses of the world.

Soft Robotics, a robotics company, manufactures pliable grippers to hold the objects. It is now going to expand its operations to e-commerce and logistic application called Super Pick which makes it easier to handle soft food items like pastries, eggs, hamburger patties, tomatoes, sweets, etc. by installing rubbery-tipped appendages to existing industrial systems, that uses a combination of artificial intelligence and human guidance to train its robots to pick up a range of differently-sized objects.

In this project, many investors have come together like Yamaha Motor, Calibrate Ventures, Scale Venture Partners, Material Impact, Tekfen Ventures, Honeywell Ventures, Haiyin Capitals, ABB Technology Ventures, Taylor Farms Ventures and Hyperplane Venture Capital leading the round.

### Robots as Gamers

Robots are introduced as playing soccer by replacing the humans. They can run, kick, and if they fall, they lift themselves. On the other hand they are playing a role of tic-tac-toe game which is especially introduced to help patients with their rehabilitation exercises. This game includes embodied play which means a robotic arm will grab and place an object and the speed of the robot will affect the user's speed. Dr. Shelly Levy states that, *"Playing Tic Tac Toe with a set of cups is one example of a game that can help rehabilitate an upper limb. A*

*person can pick up and place many cups while enjoying a game and improving their performance of a daily task.”*

Few of the robots would respond or reciprocate when being hugged. They have been created in a 3D printer and the fingers are filled with air that’s why they’re soft; that can lay down both flexible and rigid materials. Pressure sensors allow the robot to sense the pressure and adjust it accordingly. It shows that a traditional “hard” robot can be retrofitted into a soft one with a bit of ingenuity.

Robots can manage painting jobs also. They could manage with the difficulties of getting every nook and cranny and also takes care of hardwood or carpet. The team working on this robot state that, *“We actually plan on mounting a camera behind the sprayer so that it follows the sprayer up and down, and hence can use image processing to make decisions about whether to actuate the spray or not. We’ve already implemented this logic in software and even have a paint quality detection algorithm. That being said, we haven’t mounted the camera just yet as seen in this video”.*

On the other hand, Ekso Bionics, the company which deals in robotics, is designing soft exoskeletons to aid factory workers in tedious, taxing and repetitive tasks. The automobile company ‘Ford’ has also joined the project to invent wearable robotic suits.

Max Scheder-Bieschin, the CFO of Ekso Bionics states that, *“Originally the company was about helping soldiers carry heavy equipment in the field. One of the co-founders’ brother was a Navy Seal. He was injured and became a quadriplegic. It pivoted from ‘how do I build things to help my brother serve our country’ to ‘how do I help my brother and other quadriplegics get up and walking again’ with that same technology.”*

An executive of Ekso states, *“In 10 years, exoskeletons are going to be analogous to the smartphone today. One of the things that distinguish Ekso is that we know how to wrap a robot around a human, and we do it better than anybody else.”*

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