"Robotics needs superior intelligence, vision & software to lower its deploying complexity dramatically"

…mentions **Nikhil Ramaswamy**, Co-founder & CEO, CynLr, in his interview with Anvita Pillai. The founder of the robotics deep-tech start-up throws light on what prompted the start of CynLr, the emerging integration of automation technologies, the effect of COVID-19 on company business, the start-up's future and more. Excerpts…

What was the reason behind starting CynLr? What problems of the manufacturing industry does it solve?

My co-founder, Gokul N A, and I have a decade long career together. We started CynLr to provide a universal solution to the elusive problem of vision for robotic object manipulation. Through our cumulative experiences and exposure to customers, we mapped out that machine vision was still very nascent when it comes to enabling robots to manipulate objects in the cluttered real world. This prevented robots from being adopted at scale. Each robot deployment involved months of planning, custom engineering and building object-specific infrastructure that was too expensive for most manufacturers to justify.

What is some emerging integration of automation technologies in AI in the robotics segment?

While ML technologies have grown leaps and bounds in the last decade, visits to shop floors with robots will expose that these technologies have had a very minimal impact on industrial robotics and the automation of manual tasks. This is because manipulating – carefully picking, orienting and placing an object – needs more than just visual identification of objects. One needs to know how an object looks from different orientations, how it feels in the hand when picked, whether it will slip or not, etc. Learning these integrations would require not only more dimensions of information about the objects but also a learning methodology in which identification and manipulation are intertwined and not viewed as independent problems.

How have industrial robots changed since the time of your company's inception? Has there been a change in the accuracy and ROI delivered?

Industrial robots have had a five-decade journey, and just as a machine that can be programmed to perform any trajectory as required, they are quite advanced these days. Robots can repeat a position or a path with 20-micron repeatability, far better than what human hands can achieve. The robotics world now needs superior intelligence, vision and software to lower the complexity of deploying them dramatically. There has been a general trend towards reducing the unit cost of robots in the last decade, which is a welcome trend that will spur adoption.

How has COVID-19 affected your organisation? Has there been an increase in business for you since manufacturers are accelerating their digitalisation journey?

COVID-19 has certainly helped automation businesses like ours, as there is an increased awareness of the benefits of automation. Automation allows manufacturers to run operations & sustain the supply chain even when the labour market is disrupted due to contingencies like a pandemic.

What is CynLr's roadmap for the next three to five years? Any expansion plan in the pipeline?

In 2022, we intend to commercialise our Visual Object Intelligence platform for industrial robots and expand to the US and Europe. Additionally, we signed our first OEM partner, one of India's largest CNC Machine Builders, with whom we will jointly launch and market a universal machine tending solution later this year.