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AI Smartz

Robust Machine Learning Solutions

Industrial Applications of Computer Vision

COMPUTER VISION
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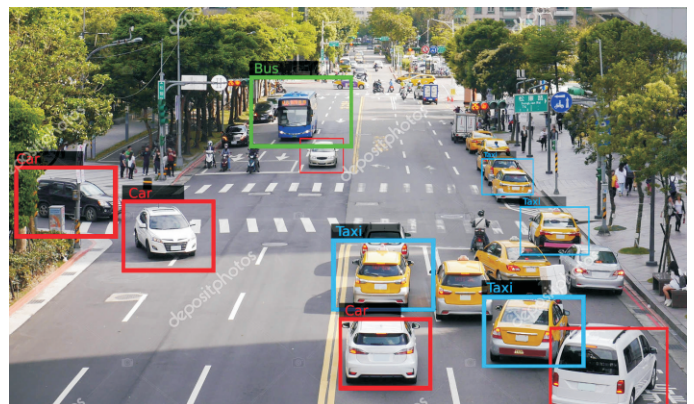
Computer vision holds countless everyday personal and business applications. One may engage them for shopping, for driving, and for so much more. Please have a look at the findings, based upon a few different industries...

The Auto Industry

The Autopilot feature shown on countless Tesla cars holds to be one of the most relevant, modern, applicable features of the best of computer vision, showing it off for its full worth and ultimate value. Tesla driver - assistance, for these types of cars, began only back in 2014, less than a decade ago, and has since then evolved much, in just about every respect. Self - parking, lane centering, and a few other features were what computer vision managed to offer, through Tesla, at first, but since then, more has been in the works as technology and the human mind for innovation alike have both expanded.

A car that can drive itself, from point a to point z, in a matter of time, is the ultimate goal here --- at least, for now, it is. And the expected timeline of completion, many experts have hoped for, would be no later than the end of 2020 - 2021, respectively.

And with such high standards in mind, thus, industry professionals in this sector have been hard at work,



and more so now than at any other time in history. Consider that a fact.

Mighty AI, for instance, was one of the founding startups to this innovation and has always backed it with the weight of its full support. It still continues to do so today, firmly believing the auto industry ought to have a crucial say in computer vision advancement, incorporating AI or Artificial Intelligence. Autonomous cars tested and validated with multitudinous multi- and single- variate algorithms is but one of the concepts it's been working on, as of late.

The Retail Industry



Retail services have likewise seen a tremendous upflair, now more than ever, in the last half of a decade alone, and it's been due to the same concepts of properly integrating computer vision tech for their cause. Here is how it can work, for example : In January of last year, for instance, Amazon Go made itself available by means of a number of computers --- this type of automated store was considered truly one of its kind, and for good reasons. It was the first to only partially consider check-out lines and live cashiers, doing mostly everything by pre-set computer coded & programmed protocols, engaging online servers and much else.

Computer vision with sensor vision and deep learning programmed into it has done much, and with Amazon, this has certainly been the case. The customer enters the store, leaves with his or her products in hand, and does not have to worry about spending time at a checkout line ; he or she can simply have the amount owed billed directly to their interconnected Amazon account...or withdrawn from there in an instant. One may set the arrangements up ahead of time, as well, saving any preferences for billing, savings and checkout, all through the Amazon account connected --- doing everything from a single spot online.

This technology has yet to be finally perfected, with no margin of error whatsoever, yet it still shows to be on an impressive path forward. It shows much poise, thus far, even though a few earlier tests did detect that certain items were not 'scanning' or 'checking out', when it was tried with live people. Yet it is certainly on its way forward, as an application of computer vision and other modern AI...

Mashgin is another retail solution also working hard toward the same end goals, quite similarly to what Amazon Go has been doing. Self-checkout kiosks, for one, are deeply in the works, using deep learning, robotic AI, computer vision, 3D image rendering and reconstruction, and much more. The goal with this organization, mainly, is to be able to one day eradicate the need for the everyday barcode, being able to have several items checked out without any scanning. Check out times can be reduced drastically, at the very least, by ten times or more ; dining halls and cafes are the main target buyers, for now.



The Agricultural Industry

Computer vision tech has already begun to be explored as a viable option in a wealth of modern farm today, and the concept of incorporating it into Quadrant Farms, for instance, shows lots of growing interest among investors. Increasing profits and yields has always been the goal, and why not use technology to help get it done? In fact, the EPA has stated that the agricultural industry alone, on a national scale, contributes over \$300 billion to its economy. That said, there is certainly potential within this field.

Overpopulation, climate change, and global food security, as well, have lately become topics of coarse concern. And they need to be addressed. This technology will certainly boost the morale, and attribute to cost and timeliness of production, if nothing else.

The Financial Services Industry

Computer vision technologies have already been hard at work in the financial sphere, as well. And one of the most business most noted, as of late, for integrating its attempts to bring it into the modern world has been that of BBVA, a Spanish banking & finance organization known well across the world. Within minutes, in fact, anyone who wanted to open a new bank checkings or savings account, starting in 2016, would be able to do so with nothing more than a valid picture ID and a selfie showing the owner holding such ID in his or her hand, to begin with. It was the start of more, at the very least, an idea worth exploring.

Analyzing the photos submitted required computer vision tech. Germany's Number 26, an online bank entirely, has also been hard at work on similar concepts, working within multiple - model prototypes incorporating computer vision and sensing, AI and more. Natural language processing, fraud detection, and much more, this modern tech is slowly finding its way into mainstream finance... bit by bit.



The Healthcare Industry



The very ability to foresee, prevent, and then segment, certain illnesses, by any wide range of known classifications, has been one of the main goals behind this. And deep learning, computer vision integration, and more are the keys by which it may be done. Many experts have already attested a positive, potential capacity for analysis in the rightful detection of many modern - day plagues and illnesses, respectively. Computer vision, as one such application, is certainly on the rise, as such.

Inaccurate diagnostics may be detected earlier. Anomalies may be corrected. Much more, ultimately, may be done.

Conclusion - Final Word

Computer vision, in essence, attributes characteristics based on certain factor and their assets. This is the short definition. But by and large, it can certainly connote a whole lot more. Engage computer vision, for either of these industries mentioned, or even for some other, and you will be engaging the modern world. And there are a host of great reasons to even study computer vision, in the first place, including but not limited to great biometrics and surveillance in all our future systems, enhanced facial recog and image retrieval, and much more.



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ABOUT NETSMARTZ

Who we are

Headquartered in Rochester, New York and with multiple offices across the globe, Netsmartz is a CMMi3 & ISO 9001:2008 certified company. Formed over 19 years ago, we currently have over 1000 employees, a rich experience of successfully executing 2000+ projects and working with small companies to Fortune 1000 clients.

Company Certifications



ISO 9001: 2008
CERTIFIED



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