

Will Rapidly Developing Technologies Eliminate The Need For Professional Photography?

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Computational Photography and Artificial Intelligence

Providing higher quality photos with the help of new hardware modules of cameras for smartphones is becoming increasingly difficult, so developers resort to “computational” photography: various algorithms and AI technologies designed to improve the images (for example, HDR + technology, which appeared for the first time in Nexus 6). The latest Google study conducted together with scientists from the Massachusetts Institute of Technology (MIT), takes this idea to a new level – an algorithm is created that retouches photos in real-time. (Encyclopaedia Britannica, n.d.)

Professional-Quality Automated Retouching

It is reported that the new technology will not only allow high-quality processing of photos but also receive a result comparable to that if a professional photographer was engaged in this. During the testing of the neural network, five photographs created by Adobe and MIT were selected. Each image was retouched by five different photographers. Then the received pictures were used to determine how it is possible to improve each image by adjusting the brightness, saturation, and other parameters.

Neural Networks for Mobile Image Processing

“Images that shoot modern cameras are often perceived as raw material for photography. Before you upload a photo to a social network, even those who take pictures on your phone spend a minute or two aligning the color and contrast with popular applications,” says the MIT blog. At the heart of the new algorithm is a convolutional neural network. The computational power of modern mobile devices is not high enough for a full system operation, but researchers have managed to circumvent this limitation – the system performs most of the calculations on a small copy of the original image and then transfers the results to a high-resolution photo.

Real-Time Processing on Smartphones

The researchers tested the program on a regular smartphone (the model is not specified), and the algorithm was able to display a processed image in real time on the screen with a resolution of 1920 × 1080 and a refresh rate of 40-50 Hz. The size of the entire software does not exceed the size of one digital photo and can be used to process images in different styles. In other words, a neural network can be trained on a new set of images to simulate the style of certain photographers.

Artistic Filters and Expanding Camera Capabilities

Approximately the art filters in Prisma and Facebook applications imitate the stylistics of these or those painters, work. Of course, modern smartphones and cameras are already processing captured data in real time, but new methods allow you to further develop the photo capabilities of smartphones.

Smartphone Growth and the Digital Camera Market

Every year, sales of smartphones are increasing, and the cameras in them are getting better and better. At first glance, this is a serious challenge for manufacturers of photographic equipment. Will the smartphone kill digital cameras, the Futurist understood. Accurate autofocus systems, high resolution, image processing applications, RAW shooting, and most importantly, the ability to instantly share a photo – all in one compact device. Some smartphones, such as the iPhone X, come with two lenses: one standard wide-angle lens and one telephoto lens for capturing portraits.

The Evolution of iPhone Photography

On the test filming, prepared by the portal Mashable, the technological progress in the work of Apple with the cameras of its devices is perfectly traced. For many, iPhones today are better than a camera. First, this is due to the compactness of the smartphone. And no need to carry extra gadgets for shooting, because the phone is always at hand. Some experts are sure that by using the correct camera settings, as well as special applications, you can achieve similar to semi-professional photo technology shooting quality. Below are the results of tests of cameras of all versions of the iPhone, starting with 2G and ending with X, under different conditions. The photo taken on the iPhone X is as close as possible to the picture that the human eye sees.

Decline in Dedicated Camera Sales

As can be seen from the infographics, the aggregate number of cameras discharged every year tumbled from 121 million in 2010 to 23 million in 2016. This is in excess of five times the distinction. Quite a while prior, starting picture takers chose to purchase SLR cameras, now they like to utilize a cell phone. Indeed, even the individuals who are occupied with photography truly are regularly happy with the nature of photographs taken with the camera on the telephone. There is a point of view that cameras will soon become a lot of elderly people. Earlier, the portal Lensvid predicted the growth of the camera market in 2016. However, their forecasts have changed: now experts predict the fall of the camera market to below 20 million units in 2017. Companies will continue to cut jobs and suffer losses.

Future Strategy of Camera Manufacturers

It is assumed that the leading manufacturers of photo technics will focus on the professional segment, respectively, and the prices for cameras and accessories will grow. There will be fewer new models. While the manufacturers of cameras survive, it is possible that by the end of the decade, the market will lose several large players. In any case, camera producers are not in a rush to sound cautious. Amid the introduction of the iPhone X, Apple particularly noticed that the iPhone has the capacity to coordinate the nature of DSLR, even with all the strange advances incorporated into the new model, including tradable focal points.

Competition Among Smartphone Camera Systems

Although Pixel 2 and Pixel 2 XL are not yet on sale, the network already has a large number of reviews with comparisons of devices with the flagships of other manufacturers. Many people are interested in the photo opportunities of the new “pixels,” as the resource DxOMark called their camera the best among smartphones. Previously, Google published examples of photos and videos taken on Pixel 2, and now bloggers have started to work.

Economic Pressures on Photojournalism

Reducing the budget of publications, increasing competition, and distrust of the press are just some of the factors that influence the future of photojournalism. However, the photos do not lose their power, and technology opens photographers’ unprecedented freedom of creativity. The world is waiting for new visual stories, so the question arises will photojournalism survive in this world?

Changing Editorial Priorities and Visual Journalism

According to the famous photojournalist Sir Don McCullin, this industry has irrevocably changed since the days when its photo histories were occupied by dozens of pages in various publications. In this regard, photojournalism is dying. Young people are agitating to go to photojournalism, but this does not make sense: newspapers and magazines are much more interested in the world of rich and glamorous, the world of “celebrity”. In their editions, they do not want to see the suffering of people. This does not bring profit to the owners. Photojournalism has not yet died, but it was tightly pushed into the background. “We talked with representatives of modern photojournalism about the current state of affairs and learned their opinion on the future of this industry in the information age. There have always been too many pictures in the world, but good pictures have always been lacking. Even for those of us who work on the most acute social problems, it became difficult to find an audience. I think that partly the reason for this is the presence of too many distractions.

Citizen Photography and Falling Image Prices

Photojournalism is not in the best shape because technology and the information era of steel for photojournalism a real shock: now everyone has a phone, everyone takes photos and sees photographers in themselves. This had a huge impact on photojournalism. As the market is simply filled up with photos, their cost has dropped dramatically, and for the publication of photos on the network, you will get absolutely scanty money. Editions now have the ability to select photos from a large number of sources, and this has greatly affected the process of choosing and using photographers – fewer people are working in the state, and for our services, people are not ready to pay large sums, especially for publishing and sports photography.

Continuing Social Value of Photojournalism

For quite some time, people have been saying that photojournalism has died, and it somehow continues to remain popular. This industry continues to live, although not as prosperous as in the days of Don McCullin, but still has great significance. Of course, her influence is not as great as before, and she will never return to that level. This is due to the fact that it has been replaced not so much but complemented by other technologies. Photography will always play a role, but there are new, better ways to create visual stories. The greatest difficulty now is the mistrust of people. See how obvious the facts are now in doubt among the public. Working in such conditions and the struggle for the status of a reliable source of information is the most difficult task for us. Photographers could not find a way to make news stories more trustworthy, and the only thing we can do is continue to do our work at the highest level. This means not only research and finding answers to the right questions but also an honest display of events. (Library of Congress, n.d.)

“To earn a living, you need to think about different ways of earning. For example, you will have to

deal with commercial projects in order to be able to go on filming refugees for a month in the future.

Technology and the Professional Photography Market

The NY Times published an article about the dying profession of professional photographers. This is another profession that has become a victim of new technologies and the Internet age. The reason for the dismissal of many professionals and the plight of others is the boom of digital photography, the improvement of the quality of amateur photos, as a result – a sharp reduction in the cost of photos in photo banks, a reduction in the print press, etc.

Why Professional Photography Will Continue

Simple photographs for memory are now rarely done in a photo studio. But to some extent, this service will still remain. Reportage photography for the media and artistic photography – will not go anywhere and will remain professional. This is creativity, first of all. Brush and paint are not a problem to buy in the store, but the artists from this have not disappeared anywhere. Are you sure that the layman will take it like this? And there are insurmountable technical difficulties for compact technology. The fact is that photography is always a drawing of light and shadow, and the light from point sources (flash on the phone) is fundamentally different from specially supplied lighting, where scatterers are used, an area of a couple of square meters and larger, giving an even soft light. There are still irremovable difficulties, which are also artistic devices (see, for example, perspective distortions and their relationship to the size of the optical system and the receiver (which is important for amateur technology)). Those who ideally convey the object can only be fully reproduced – for a man – a sculpture. The rest will already be compromises, professional equipment will do better since the size of the receiver and the optical system can be larger.

Self is not at all an indication that photographers may not be needed. After all, professional photography, in fact, is everywhere. In the news feed from photoshoots. On billboards, in magazines, in online stores; on all the illustrations that we see in a day. All this is the result of the work of photographers. Quality photos will always be in demand. The decisive factor for the survival and prosperity of photographers is people who need high-quality photographs. Those who need to either show the status or the high cost of a thing. (Professional Photographers of America, n.d.)

New Smartphone Imaging Features

The front camera iPhone X can capture the movement of a person's face and broadcast it to the Emoto – get Animoji. These are 3D emoji models with faces (there are a few of them: a panda, a fox, a hare, a turd, and several others) that can smile, frown, sad, and rotate. Animoji can be sent to a friend

via iMessage – and it will receive a turd that speaks your voice and, for example, all its appearance shows that it is sad. Apple also improved the portrait mode, which allows blurring of the background on photos taken on a model of dual-camera phone. In the iPhone X and iPhone 8 Plus, artificial intelligence is able to change the lighting parameters of a picture by one of the “studio” templates – draw a contour light on your face or completely darken the background. In the case of the iPhone X, this also works with the front camera.

Digital Accessibility and Amateur Competition

In the era of film cameras, to make a quality shot for the first time, you need a lot of practical experience and knowledge. By some estimates, becoming a professional took 10,000 hours of hard work. Now, just look at the screen of the digital camera, adjust the settings if the white balance or exposure is not optimal, and take another picture. Even the most ordinary amateur on a digital camera can make some really beautiful and high-quality photos (there are many such examples on Flickr). And they are happy to sell these photos at the lowest price (one dollar, for example) or give them away for free. Accordingly, professional photo banks are practically packed with quality and super-cheap amateur content. Not surprisingly, the Getty Images photobank has concluded such an agreement with Flickr.

Stock Photography and Declining Professional Income

In comparison, in 2005, Getty Images licensed 1.4 commercial photos for sale, and last year – 22 million, and all the additional content came from the UGC sector. You can imagine the scale of falling prices and the decline in income of professional photographers. As the NY Times writes, as a result, many photographers are now forced to combine their work with other activities, for example, the creation of banners for online advertising.

Globalization of Photographic Assignment Work

Plainly, film to computerized, print to the web, and staff picture takers to autonomous. In any case, individuals disregard the suggestions and consequences of what those progressions really mean. So recollect how photos used to be one of a kind, and you would take somebody and send them to Europe to make a particular arrangement of pictures and convey back this story to perusers who hadn't seen anything like that previously? The approach of the web implied that photo editors, in numerous cases, quit sending individuals off on those stories and rather utilized the web to discover a picture taker who was at that point in Bucharest, Prague or Lagos and have them email their pictures back. On a little scale in the United States, magazine editors quit employing awesome picture takers and rather Googled who was in Dubuque, Iowa, and essentially settled on whoever was there. Perhaps

there was an awesome picture taker there; however, as a rule, there was an incredible trade-off and debasement of the substance of the pictures for the sake of the item's financial matters.

Economic and Creative Devaluation of Photography

There was an awesome financial downgrading and philosophical cheapening of photography. It used to be about the vision of the picture taker you were sending. It was not the main concern choice. It was about the gauge of news-casting and the bore of photography that was being delivered. Presently, picture takers will acknowledge whatever they can stand to get from some individual who's, as of now, there. It's not about the gauge of the news coverage or photography. That is an accountant's choice. The pool of accessible picture-takers extended exponentially with the approach of worldwide correspondence. Yet, that wasn't really useful for the picture-takers. That made them accessible, however, it didn't imply that they were by and large appropriately paid or that their work was as a rule legitimately utilized.

Employment Changes and Multimedia Expectations

Less daily papers and there are fewer staff photography employments. Several daily paper staff picture takers have turned out to be autonomous photographic artists. The item they were creating before was still photography. Presently, they're being requested to deliver video, sound and slide appear, as well, while being paid a similar sum. Since they get their pictures from Getty Comstock and other photography organizations, they're not passing judgment on them on a similar quality premise. There used to be an identity allocated to photography. You know, Cartier-Bresson, Robert Capa, or some nine-time daily paper picture taker of the year. There was a sure panache connected to that. Presently, photography is relatively unknown since it's homogenized.

Declining Prestige of Photojournalism

Photojournalism used to be extraordinarily lofty and a much-looked-after calling. The general depreciation of photography that began years back ran simultaneously with the steady destruction of daily papers, which ran simultaneously with the ascent of the web, which ran simultaneously with the utilization of video, and it was a long, moderate, basic ailment for photojournalism. The trouble of bringing home the bacon has skewed the calling far from individuals who are regular workers. In case you're attempting to gain a living from it, you better have a year's pay or two in the bank. What's more, the sum you're being paid for an everyday task or staff work is absurdly low.

Career Sustainability and Diversified Income

For what reason would somebody endorse the cost of a four-year college degree to go after a \$35,000-a-year work? In case you will procure a living now, you must be a picture taker who once in a while does photojournalism. You must have the capacity to do wedding photography, corporate photography, or occasion photography. The open doors are more prominent. However, all that really matters is would you will be able to pay your bills toward the finish of the month. Or, then again, do you need to be bolstered by another person? Renaissance craftsmen were upheld by benefactors. There are no benefactors supporting photojournalism now. The benefactors were daily papers and magazines. Furthermore, they've removed the cash. That is only its crude truth.

Future Adaptation of the Profession

Things need to change for photojournalism to survive. The specialty of photography and photojournalism for some time advanced into a calling. Also, there are a couple of individuals who are as yet ready to rehearse that calling and win a living. Ever, there have been callings that fundamentally vanished. There's as yet a couple of stacks cleared around, dislike there used to be. The inquiry is, what will photojournalism develop into, and would someone be able to procure a living doing it? Or, on the other hand, is everyone now a picture taker, as everybody supposes they are Ernest Hemingway since they have Microsoft Word? Daily papers went down that street, as well, giving all the staff columnists a camera of an iPhone X. It is an over two-megabyte document, looks quite perfect, and it will look incredible replicated on the second cousin to can tissue.

Conclusion on Smartphones and Professional Photography

Special interest in the comparison was caused by the fact that the cameras of these two smartphones are the best not only in terms of users but also according to the DxOMark version. The average score is Google Pixel 2, and iPhone X only divides the second with Huawei Mate 10. But if you look specifically at the points received for the photo, then the iPhone has already become the sole leader. This added fuel to the fire and caused a desire to compare the two new products at the end of last year.

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