

# THE ROLE OF PROGRAMMING: SHORT-TERM PERSPECTIVE

*Emello Z. A.*

*Belarusian State University of Informatics and Radioelectronics  
Minsk, Republic of Belarus*

*Schakatovich A. N. – Senior Lecturer*

The paper is concerned about the theories of what programming will look like in the near future and its role in society. It is considered why programmers will become workless in 10 years. It is mentioned how to stay demanded in future and there was made a prediction about society and its relationships with programming in prospect.

According to Gerd Leonhard, a German futurologist, in 10 years programmers will become workless [1]. This declaration has caused lots of debates and arguments among people who are involved in the IT-sphere.

The first point for arguments is AI. Will it replace programmers? The answer is yes and no. Although there are already invented tools like Github Copilot [2], which can convert textual comments into code and autofill pieces of repetitive code, they can't be used for writing programs from scratch without involving programmers, as many users wish to. Moreover, these tools can only be used by programmers in order to automatize simple moves and make time for processing harder things. It will be possible to talk about competition between AI and humans only when AI is capable of creating software by itself. But this will only happen when computer systems will manage not just to collect and analyze data, but actually generate ideas as we, humans, do. This scenario is quite hard to carry through, as scientists haven't even revealed yet all the secrets about our brain processes and how our mind actually generates ideas.

There is also a concept telling that programming will become more abstract and it will differ from what we've got nowadays. This theory proposes that developers will stop using low-level programming languages and start combining some "module" solutions, like in constructors of websites (wix.com) [3]. These thoughts are far from the actual sense of programming. None of the things mentioned earlier can exist without support of developers. If you wish to customize your program even a bit you have to possess knowledge of programming, have an understanding of how algorithms work and be capable of using specific instruments. The same problem goes for constructors of websites. As it is said, if you want something to be done right, you've got to do it yourself.

But what will actually happen with programmers in 10 years?

First of all, weak programmers, people who code only in one language, or make websites in constructors and haven't learned anything new for decades will actually become workless. It is so because time passes by and the knowledge gained a few years ago very quickly becomes not actual, especially in IT. This situation reminded me of visiting an IT-company. Somebody asked one of the developers: "Which languages can you code in?" He asked back: "Which ones are more preferable?" This is a great example of a man, who will be always demanded, because he is flexible, ready to learn and adapt in order to keep in track with time.

Science also requires more and more programmers, so in future it will be needed specialists with one more basic education (biologists, engineers, doctors etc.) who will be working only in their sphere.

Cybersecurity has always been and will remain the biggest problem in IT-sphere that requires highly qualified staff. Cybercriminals never give up on trying to steal money or data. The latter is even more valuable nowadays, so this sphere needs lots of development in security systems and testing new software. As a result, security in IT is still a good field to devote your time and yourself. It is considered that it will be actual even in 15 years, so if you are hesitating on choosing your direction in IT, choose cybersecurity and it will definitely pay off.

Summing everything up, there is no doubt that programming is destined with another role in future. It can be definitely stated, programming will integrate more in peoples' lives. It is supposed that in the near future people will have to be programmers no matter what their main job is. They will have to not only be good users of software but also be capable of adjusting it to themselves if something changes rapidly on their workplace. Still, there will be developers, who understand this on much deeper level and do the main job while users will just edit a little for their needs.

**References:**

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