GIS, Automation and your Future

Adena Schutzberg gives her view on whether people are still welcome in the world of GIS and can more be done in getting people where they are needed.

I finished school at age 22 with two degrees and few skills. As one senior consultant put it when I was an intern at a consulting firm, I knew "how to read, write and think." And, that was a good thing because it meant I could read hundreds of pages, pick out the key details, and compile them into a 20 slide presentation for a corporate client. Of significant importance to that same senior consultant, I could do that far less expensively than he could. I did just that and everyone, including the client, was happy.

At that same job I made myself invaluable, for better or worse, by learning AutoCAD. I could digitize the rough sketches of the engineers and biologists relatively inexpensively. I did quite a lot of that and everyone, including the client, was happy.

I learned a lot at that internship, which later turned into a job. The big business concept I took away was the fact that consulting the client could have the deliverables, with just two of three properties: fast, cheap, accurate. Moreover, I teased out, in most situations, consulting does not scale since to do more you need more people, and people are expensive! The firm I worked for declared bankruptcy ten years after I left.

Technology Welcome!

I left consulting and I went into GIS. It was still early days for the technology in the 1990s and there was significant demand for individuals to help towns, cities, businesses and utilities automate their map data. Even then the writing was on the wall, suggesting that in time, many of these data automators were putting themselves out of jobs.

I saw evidence of GIS users leading the charge in putting themselves out of jobs right in my office! One of my colleagues "wrote the code that wrote the code." Jump forward 20 years and more towns, cities, businesses and utilities can select and, to some extent, implement GIS on their own. They can test out a cloud service without installing anything. They can take free online courses to learn the software. They still lay out some money for consulting, but I don't believe it's at the same order of magnitude as in the past.

The fact that government employees and industry leaders know they need geographic tools, and can select and begin using them without handholding, suggests GIS vendors and consultants, from the 1990s up to today, have been successful. It also means more students coming out of school are not getting jobs, despite regular indications that there are not enough geospatial practitioners. I saw an article just this week noting Namibia needs more technologists with spatial skills!

What's happening, as I see it, is that more and more of the tasks geospatial analysts and technicians did back in the 1990s and 2000s are automated. There are some people "doing GIS" for sure, but others are putting them out of work by "writing the code that writes the code" and "writing the code that makes the maps." Nearly every discussion I read about preparing students for the GIS workforce ends with "learn to code."

Humans Still Welcome!

Where are the new GIS jobs? I'm not sure the government and industry are making many new ones these days. Some existing GIS positions, including those that involve coding, will provide temporary job security. Others, that involve combinations of technical, people and industry skills, are likely to stick around for the long haul. I'm thinking of managers, for example, who can create order out of a team of people in part because they understand the technical problem they are trying to solve but also because they can motivate and manage people. I'm thinking of industry specialists who can code with GIS tools, but also have industry knowledge in a discipline like forestry or business.

Those seeking jobs in GIS in the twenty-teens (2013-2019) can expect coding to be part of their skill set, but it won't be the only thing that keeps them employed until retirement.

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