

Chemjobber here. Someone we'll call MK was kind enough to write in response to the bench-to-data science post that was published on March 9, 2017. Their essay (very lightly edited is below):

To introduce myself: I did a physical chemistry PhD (some kind of spectroscopist) and then did something weird: I took a postdoc in [something data/public health/medically-oriented] at a government lab. I stayed in my post-doc for 1.5 years, found a job, and now work as a "biomedical analyst" (not my real title, but very close) in the government.

My day-to-day consists of writing and running code (I run R, through RStudio), analyzing research portfolios (in terms of science research topic areas, investigators, initiatives, etc.), helping to build dashboards and other analytic tools, and a variety of other things - but with a heavy emphasis on coding and data analysis, to support research program staff, and give them the information that they need to create policy and effectively run their programs. I present all of my work via Powerpoint presentations, to groups of varying sizes, depending on who requested the analyses.

Some of my colleagues with identical job titles handle much more qualitative work, but I like quantitative work (numbers, charts, and code, oh my!), and I do love my job. I think that's one misconception about "leaving the bench/science;" you don't have to give up quantitative work if you don't want to, but there are many outlets for more science writing and communications type projects, as well. And, if you can neatly combine quantitative metrics with an ability to explain, in layman's terms, what you've done, even better.

I had zero coding experience when I started my postdoc, and not much of a traditional statistics background. I taught myself R through a combination of Coursera (the Johns Hopkins Data Science Toolbox courses are excellent), and good books (some recommendations: "R for Data Science," by Hadley Wickham and Garrett Grolemund, "Discovering Statistics Using R," by Andy Field, "R Graphics Cookbook," by Winston Chang, "Mastering Predictive Analytics with R," by Rui Miguel Forte, and "A Handbook of Statistical Analyses Using R," by Hothorn and Everett; these differ in level, but I've found them all to be really helpful).

It helped that I had actual postdoc projects to tackle using R, but I think it is possible to learn on your own - there are a lot of projects out there, and lots of publicly available data, to serve this purpose. I would definitely not say that I'm an expert coder, but I've successfully written functions and fairly complex scripts on my own, even though I sometimes struggle with the feeling that I'm pretending and it will all come collapsing down at some point, when some real computer scientist comes along and exposes me!

As I was doing this, I discovered that I really liked this kind of work - statistical analyses, and working with larger data sets; it had the same kind of puzzle appeal that drew me toward spectroscopy initially, and had the bonus of being non-bench work and more marketable.

I never wanted to be a PI, but I also didn't have the kinds of synthetic skills that are valuable (at least, based on job postings) in industries like pharma and biotech - and those kinds of projects never interested me. I began reaching out on LinkedIn to strangers who did strategic and analytic work - at creative firms, at tech firms, at big retailers, at government offices.

I wrote a blurb that I added to all of my LinkedIn requests, explaining in 2 sentences who I was and why I wanted to connect, and if they might be willing to do an informational interview. I was amazed by the number of people who responded, and responded positively; I did a number of informational interviews (mostly over the phone), and learned a lot about the other types of jobs out there, and the desired skills for these jobs, beyond the dichotomous academic/industry realms. It also helped me gain some confidence in networking.

I still hate it, but it is a skill that needs to be practiced, and it gets easier, if not more enjoyable. During this time, I had a couple of interviews at big tech companies who were looking for data scientists, but none of them were successful (I definitely think I didn't have enough of a solid, traditional computer science background for some of these).

I lucked out in that my postdoc mentor was well connected, and when I told him what I wanted to do moving forward, he was very supportive. He put me in touch with some people, who sent me along to some other people, and I managed to get what amounts to a part-time internship (detail) at a government evaluation and analysis office - as I was doing my postdoc.

My intern boss was wonderful (as a former Ph.D. bench scientist who had come along a similar journey), and made sure that I was exposed to a wide variety of projects. When a job posting came up, both bosses were great references, and the opportunity also turned out to be perfect - an office was looking for someone who had more of an epidemiology background, who could code and run more rigorous, "big data" type analyses, but who also was familiar with the system and could communicate well.

Part of my postdoc was involved with clinical trials, and communicating more technical (spectroscopy) work with other types of scientists (social scientists, clinicians, biologists, epidemiologists), and I've always been pretty good at translating jargon into broader language. That was a strength that I made sure to capitalize on, because my current office is run very much like a business, with deliverables and an emphasis on communicating results to outside staff, as well as interacting with other offices (budgetary, IT) who may not have/need traditional science backgrounds.

My (albeit limited) experience has been that there is often a true demand for these kinds of people - people who have tech/sci backgrounds and "hard skills," but who excel in the interfacial cracks between/within science and policy, or science and administration. My colleagues are mostly people with business/managerial backgrounds, or scientists - B.S., M.S., Ph.D....and M.D.s, of course, and it's helpful to know how to interact with everyone. One of the full-time staff at my internship actually taught me a lot about office conduct, expectations, and things to be conscientious of, and that was really helpful for me.

I've been in this job for less than a year, and there's a lot to learn, which I view excitedly and positively. My business now is scientometrics, and it's fascinating to me. I feel like my skills are utilized, I have a good work-life balance, salary and benefits are good, and there is room for growth, which is all very positive. I also live in a metro area with a lot of opportunities, so the 2-body problem has been solved for now (fingers crossed). I know that not everyone looking for this kind of transition has these kinds of circumstances, so I hope it was helpful in some way.

As an aside, I do have colleagues from grad school who either participated in short-term coding camps or taught themselves the basics, and who are now employed by tech companies as software engineers, developers, and data scientists, so there is at least some anecdotal evidence in support of something like that. I think it's mostly your initiative, and learning how to sell what you have, that becomes important in the end.

It helps if you know what you want to do. That sounds stupid, but sometimes as we move along through school/post-doc, we forget what it is that we really like about what we do, and how to channel that into a career. A senior scientist asked me that question while I was in my postdoc, and I think that helped me focus on what it was that I did like about my postdoc, and what I wanted to carry on doing. That helped generate enthusiasm - which is what I conveyed in my cover letter and interview, and what probably helped get me my current job, as my boss is really excited about what we do, and I am, too.

Sorry about the essay, and hope that helps! So many people were nice to me in my job search, and I wanted to pass that along. Thanks to CJ for providing such a great space for the community.

Thanks, MK, for your story! - Chemjobber