

3 Mistakes to Avoid While Learning Data Science

The mistakes that I think aspiring data scientists are likely to do.



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I started learning data science in 2019. It took me almost two years to [land my first job as a data scientist](#). When I look back at my learning journey, I feel like I accomplished a great deal of stuff. Amidst those accomplishments, I also see some mistakes that shine crystal clear.

I do not regret making those mistakes. I think each and every one of them thought me something. However, I would have a more productive learning path without them.

In this article, I would like to share 3 mistakes that I did while learning data science.

1. Too much watching

It is a challenging task to learn data science. What makes it hard is not a lack of resources. There is a tremendous amount of resources to learn data science. They are offered in various forms such as video and tutorials, articles, MOOC courses, micro degrees, and so on.

Having lots of resources does not assure an efficient and productive learning path. We need to choose and use them wisely. Otherwise, we would be wasting some amount of time.

At the beginning of my data science journey, I was spending most of my time watching video tutorials. They were clearly explaining the key terms and concepts. Most of them were easy to follow as well. I felt like I was learning at a very good pace.

It did not take me long to realize that I was just understanding, not learning. I think there is a big fallacy associated with watching

video tutorials. Since they clearly explain stuff, you feel like you learn. However, you just understand.

As stated in this [article](#) by Nick Dam, “changes in neural connections, which are fundamental for learning to take place in the brain, do not seem to occur when learning experiences are not active. Many research studies suggest that active engagement is a prerequisite for changes in the brain. Not surprisingly, just listening to a presentation or lecture will not lead to learning.”

We need to engage in with active learning. In most cases, it cannot be achieved with watching video tutorials. We need more sessions of practicing. Hands-on tutorials take more time but they are definitely more efficient than learning.

Avoid spending long hours watching video tutorials. Instead, you should try to tackle down challenging problems. When you are solving such problems, you will likely to encounter obstacles that are not covered in the video tutorials and MOOC courses. Thus, it is an excellent resource for learning.

2. Neglecting SQL

SQL is a programming language and it is used for interacting with relational databases. At first, I thought of SQL as a tool to retrieve data from a relational database. But, it is much more than that.

I knew I needed to learn SQL. I learned the basics and how to write simple queries. I thought it was enough SQL for a data scientist. But, I was clearly wrong.

SQL is a must-have skill for a data scientist. You need to go way beyond than writing simple queries. SQL provides numerous functions and methods that can be used for data analysis and manipulation.

The most famous data analysis tool might be the Pandas library of Python. Most of the operations that you can do with Pandas can also be done with SQL. The syntax may not be as simple as Pandas but there is almost always a way.

The biggest advantage of using SQL for data analysis and manipulation is that it allows for only retrieving the data you need. It is clearly more efficient than retrieving bulk data and then performing operations.

I should have spent much more time learning SQL. If I started over, I would try to master it. After I started working as a data scientist, I realized how significant it is for a data scientist.

3. Doing projects instead of A project

If you do not have prior job experience in data science, the best way to demonstrate your skills is to do projects. There is a ton of

blog posts that emphasize the importance of projects for aspiring data scientists.

There is nothing wrong about doing projects. I also did some of my own. The problem is that most of the commonplace projects are not challenging enough. A project that you can complete in a day or two is not likely to attract hiring managers.

Those projects are good for learning and practicing. However, relying on them to find a job is a mistake. Instead of completing a dozen of such projects, you should try to complete a project that stands out.

Being a data scientist is not just about using tools and packages. Data scientists should be able to identify a problem that can be solved with data. Then, they design and implement a solution. A project that shows you have the skill of using data to find a solution is a game changer.

You should avoid focusing on completing several piece-of-cake projects. Instead, you should try to come up with an original idea. It is not an easy task but if you manage that, you can attract a handful of hiring managers and recruiters.

Final thoughts

I spent almost two years landing a job as a data scientist. During this time, I did some good things as well as some mistakes. I wanted to share some of them. I think many aspiring data scientists are likely to do similar mistakes.

It is important to note that your learning style or journey might be totally different than mine. If so, I suggest focusing on techniques to make your learning journey as efficient as possible. Time is the most valuable resource after all.

Thank you for reading. Please let me know if you have any feedback.