**What I Look For in Every Data Analyst Candidate**

**From the Perspective of a Hiring Manager**

**Introduction**

The vast majority of my career has been spent in the field of data analysis. Early on, my work was of a much more technical nature as I focused on the designing and building of data warehouses. As time went on my work became less technical as I gravitated towards the business side of analysis and eventually into data analysis managerial roles. This career path has given me a unique perspective (and appreciation) of the role of the data analyst within a business organization. I wrote this piece to provide my perspective to anyone who is either looking at data analysis as a career or who is currently a data analyst seeking to advance their career. While there is ample instructional material devoted to the technical aspects of becoming a data analyst, I have yet to see anything meaningful published from the perspective of a hiring manager. My hope is that your reading of this will help you in your journey to becoming a highly sought-after data analyst.

**The Need for Data Analysts is Real… and Growing**

Ready to have your mind blown? During the ten years between 2012 to 2022, the volume of data in the digital universe increased 15-fold, [from 6.5 zettabytes (ZB) to 97 ZB and it is estimated that within the next three years (by the end of 2025) that number will nearly double to 181 ZB](https://www.statista.com/statistics/871513/worldwide-data-created/)! Translating that into more relatable terms, one zettabyte equals one TRILLION gigabytes of data. As digital transformations and the internet of things (**IoT**) continue to proliferate, the volume and spectrum of data collected will only continue to grow. This explosion in data has been made possible by revolutionary advancements in the Big Data construct that enables all of this data to be captured, wrangled, stored, processed and analyzed in near real-time. However, as the volume of data we produce continues, the business insights that we have been able to glean from it have not. In fact, the gap between data gathered versus insights gathered has only continued to grow despite the billions of dollars being spent each year on efforts to close it. One of the primary reasons that this gap exists is the shortage of qualified talent to do the work.

**Focus Your Technical Skillset**

When I started my data analysis career in the early 2000s, data warehouses were all the rage. My technical toolbox included a relational database, a database design tool (Erwin), an extraction transformation load (ETL) tool, a business intelligence (BI) tool and of course, structured query language (SQL). It was an intuitive set of tools, with a relatively easy learning curve. But in today’s data analysis environment, given the sheer volume of data now stored in a multitude of different forms and levels of structure, a plethora of skill sets and roles are required to perform analysis. It has even given rise to the highly coveted, multi-skilled role of the data scientist.

With so many different technical skills in need, how does a prospective data analyst choose which one(s) to learn? While choosing what to learn is not the specific focus of this article, what I will tell you is that you should be spending the finite amount of time you have **mastering** the ones that you have chosen. The first half of the old saying “a jack of all trades is the master of none”, fully applies here. In my experience as a hiring manager, many who are new to the data analysis workforce, tend to present a laundry list of technical skills that they have fair to rudimentary knowledge of in the hopes that it might give them an edge. This is a mistake.

What matters to me is that you can demonstrate the ability to use the skills you have learned in a real-world application. For example, if you have spent your time learning how to program in R (the statistical language), I would want to hear about how you deployed it to answer real-world questions versus just being able to recite a list of functions you could call. Describe the question you were seeking to answer from a business perspective and then what functionalities of the tool you used to answer it. Being able to do this will demonstrate two things to me. First, that you possess the technical skill and second (and much more importantly), that you understand how to use it within the context of a business.

As a side note, many data analysts possess outstanding technical skill sets but still cannot apply them without detailed guidance from the business. On the other hand, if you can demonstrate that you have mastered a particular technical skill in the manner that I have described, I will then have the confidence that you will be able to master and correctly apply other valuable technical skills after I hire you.

**Learn as Much as You Can About the Business You Support**

As a hiring manager, the ***primary trait that I look for (and value the most) is curiosity***. For data analysts, that curiosity is demonstrated to me by their ability to show a true understanding of the business that they are supporting. At a high level, can you tell me what the company does, and how it makes money? What challenges does it have? The more you can tell me the better. And then, at a more detailed level, how did the analysis you perform help the company? For example, if your company was experiencing extreme delays in the shipping of their products and you were tasked with finding the cause, what was your approach to analyzing this issue? Can you describe to me, in detail, what the actual shipping process was? And then, based on your understanding of that process, how you structured your analysis and identified the issue? If you could, I can guarantee you it would set you apart from the majority of data analyst candidates. ***The best data analysts possess a thorough understanding of the business operation that they support.***

For the neophytes, who are considering data analysis as a career, I would encourage you to take the same approach as you are learning technical skills. Don’t just learn how to code or use analytic software by rote, it will be wasted time for a number of reasons. There are plenty of publicly available data sets you can use to create your own data analysis scenarios. I encourage you to take this approach for two reasons. The first of course is to learn a technical skill. The second (and perhaps more important), is to find out if this is work that you have an aptitude for and might actually enjoy. Becoming a data analyst is a huge commitment. Take this as an opportunity to sample this role in advance so you can determine whether or not it is a career path that you truly want to pursue.

I’ll close this section on a personal note. During my time as a data analyst, ***I always made it a goal to try and understand the business that I was supporting as well as they did***. I found that by doing this, I became an incredibly effective data analyst which in turn made me an invaluable team member. It also made my job much more rewarding as I could see, first-hand, the value that I was adding. I cannot emphasize enough how pivotal taking this approach was to my career. If there is one thing that I could have you take away from this reading, this would be it.

**Keep Your Technical Knowledge Base Up to Date**

The technical landscape for data analysis continues to evolve and grow at light speed as more and more companies recognize the veritable pot of gold that the ability to gather insights from all of this data represents. AI, ML, the Cloud, Hadoop clusters, Apache Spark, data lakes, data pipelines, data fabric, data mesh, data visualization, the list goes on and on as new technologies, architectures and analytic approaches continue to come online. Being proficient in all of these is clearly impossible, but I would strongly encourage you to develop a conceptual understanding of their function and what role they play in the overall data analysis picture. I can almost guarantee you that there will come a time when you realize a great opportunity by developing a new skill in one of them. Also, keep abreast of the top trends in data and analytics. The highly respected Gartner does a brilliant job of documenting this annually with their “[Top Trends in Data & Analytics](https://www.gartner.com/en/webinar/430318/1035298)”. Building and maintaining this knowledge base will help with your overall understanding of the many different aspects of data analysis as well as keep you relevant in an ever-evolving field. Remember, stay curious!

**Conclusion**

This article is one that I have always wanted to write. Throughout the course of my career, I have taken note of the things that I wish I had known when I first started as a data analyst. That list has grown, shrunk, evolved and crystalized over the years. With the recent explosion in data and data analysis, my urgency in sharing my thoughts increased as I can only imagine myself being overwhelmed with the complexities of becoming a data analyst in today’s environment. I thank you for taking the time to read this and I genuinely hope that you have found some value in it. I wish you all the best in whatever career path you ultimately choose.