**6 Learnings from Working as a Data Analyst for a Year**

**Notes from a (now) Senior Analyst on how to be successful in your job**

Hi! I am Rashi and I work with a health insurance company based out of Chicago. Before starting my full-time job last year, I interned with PepsiCo for almost a year, and the learnings from my internship and a year as a data analyst taught me experiences, best practices, and more importantly the mistakes that data analysts can be vulnerable to.

In the past two years, I have worked with a large number of datasets, and hundreds of data points, and every dataset answered as many questions as you wish. You only learn each day from your job, your mistakes, from collaboration, and from talking to peers about their challenges. As a data analyst in 2022, to be the most relevant that I can be, I have grasped six valuable and quintessential lessons that I will keep with me to the time I work with data.

**1. Validate your data and analysis, every time**

As a societal measure, human lives seek validation in every aspect of life. Then why not your data analyses too?

Data Validation is the process of ensuring consistency and accuracy within a dataset. Validation could range across data types, code, format, consistency, and output of a model, and could be before the analysis or after. Data validation is a very critical step in any data science lifecycle to create the best possible results and is often looked over.

*For example*, the business asks you to predict sales for the next holiday season. You code your predictive model and send an Excel sheet for a product-wise sales prediction with charts. Now, a senior manager emails you (and your boss and twenty other people) why a high-performing product would have below-average sales in the holiday season. You start to validate your analysis only to realize you used the wrong VLOOKUP to populate the product name from the product ID.

As data analysts, our job is not only to predict the absolute best of a scenario but also to —

1. Validate the data joins are correct: left join vs inner join
2. Corroborate business sense with the outcomes of your analyses
3. Be able to justify what an error means for the business
4. Understand the business context to interpret the conclusion of the analysis
5. Confirm that the data meets principles of analysis: collinearity, handling null values, duplicate data
6. Read the email and the content of attachments **twice** before sending

**2. Understand the business context**

As data analysts, I cannot stress enough how important it is to understand the business at the deepest depth you can.

Every time I talk with a data professional working for at least 10 years (before this all was called data science & analytics), I always connect on the conversation on understanding the business to be a better storyteller with data.

Unless you have the relevant business understanding, I’ve found it difficult to navigate through the steps in a project. As you understand the business problem, more important than anything, you know what questions to ask the stakeholders, the data and what to expect in your analyses. Times when I was raw as an analyst and spent no time understanding the business, my data and analysis both had tend to lose the essence and impact it is supposed to create.

For any analysis at hand, unless you understand the business, you can never know what an error in the model means for the business, why are the numbers inflated for a county with a low population post product launch, etc.

Be it any industry, hone on your business acumen everyday

**3. Learn about the KPIs and data points**

Every time I have a new problem statement in hand to work on and if I am not aware of the steps from start to end, I have learned to establish a practice for myself where I set up interviews with the stakeholders, understand the metrics that are important to the ask and note down the three most important things the business would like to know.

Data points are basically the building blocks of data analysis.

They serve the purpose to accept or reject a hypothesis, spotting trends or patterns, or making predictions. Over these years, I've realized, as you have a stronger understanding of your data points and key performance indicators, which has enabled me to suggest rather effective recommendations that best fit the business goals.

Data cannot lie and so if you can align your key measurements to the business, data will provide objective feedback on business performance.

**4. Be a problem solver and an innovator**

As a data analyst, I am (and surely you are too) faced with new challenges every day — with data, business problem statements, organizational alignment, data management, quality, etc. When I started, I had an attitude that leaned toward identifying those challenges and then just talking about them to my manager.

Now, your manager may not always understand your challenge or be able to suggest a solution for “your” problems as an analyst. As we stepped into the new year, in retrospect I understood that this attitude can only take me so far.

I changed my perspective to look at the bigger picture if there are challenges, what is the next best thing I or someone else can do, and recommend innovations in the team (and if it gets approved, you have your achievement right there). I now constantly think of ways I can add value as an analyst to the business.

Innovation is taking two things that exist and putting them together in a new way.

**5. Translate data for business**

The role of data is to empower the business to make decisions based on stats, trends, and insights.

In the ever-expanding data world of today, there is a need and demand for people to simply make sense of that million gigabytes of data. The business is seeking more and more people to translate data to drive decision-making. Data is never pretty and as data analysts, it is our job to make that data palatable and for the business to consume the insights discovered from that data.

Over the past years, working on multiple projects, I’ve now carved a niche for myself where I love working at the intersection of data and business. This is one of the biggest learnings I had as an analyst. Data can’t talk or influence change by itself, and I, as a data analyst must be able to organize and interpret it.

While I’m working on creating a strategic roadmap to support platform modernization impacting 17 million people, I am also working on creating a predictive model to forecast the number of customer service issues in the next quarter given x number of data points. As consumers of data, create your analyses and visualizations keeping the business in mind.

**6. Work smart**

As an analyst, you cannot code for almost the same task again and again. You have to **reuse your code**. I was never big on version control when starting nor would I save structures to only change data points. I have discovered that saving an SQL query or a sample data model for later use saves me a lot of time, increases my productivity, and invites best practices in version control.

Second, a thing I have now made a point of is to **maintain documentation**.  
I know it sounds very boring to write down steps in a Word document as a data professional but trust me, documentation has helped me and my team a lot to understand the project context & set expectations better. It is also very easy for other members to onboard the process quickly.

Third, (in whatever capacity you can) promote **centralizing data processes** in your team. While 100% data centralizing can seem a dream, it indeed supports continued improvements in decision-making processes —

1. Facilitates better optimization
2. Enables easy and quick data management
3. Invite better cross-functional collaboration
4. Align the data strategies with the business goals, mission, and vision
5. Avoid discrepancies from using disparate data sources

You deserve the data consistency as an analyst.

That’s it from my end for this blog. Thank you for reading! Let me know in the comments about your interesting projects, your journey in data, and what are looking for in 2022!

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Happy Data Tenting!

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