HOW TO BECOME A DATA ANALYST

A STEP-BY-STEP GUIDE ON HOW TO FAST TRACK YOUR CAREER IN DATA

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INTRODUCTION

Who am I? I'm a professional Data Analyst that got into the field with no prior tech experience and no college degree. I dedicated myself to honing my skillset during my off hours. As if it wasn't challenging enough prepping myself to get into the data field while working 12-hour shifts, many 60-hour weeks, and taking care of regular life tasks, I also became a first-time father to an awesome little human while doing so.

If I can do it, so can you!

SUMMARY

I spent about a year researching and learning how to become a Data Analyst. I found that there wasn't a detailed roadmap on how to get started out there for me to follow. I created this guide to give others the roadmap that I wish I had when I was trying to enter the data field. I've condensed what I've learned through trial and error as well as what I believe to be the most helpful resources from multiple platforms into one easily digestible format. I will walk you through the exact steps that lead me to my very first entry-level Data Analyst job and explain how I expedited the entire process without any unnecessary fluff. This eBook will give you detailed steps from what to learn to how to create your resume, and everything in between. My hope is that this eBook will help you find the tools to feel confident that you have the knowledge and skills to break into data analytics and do it quickly.

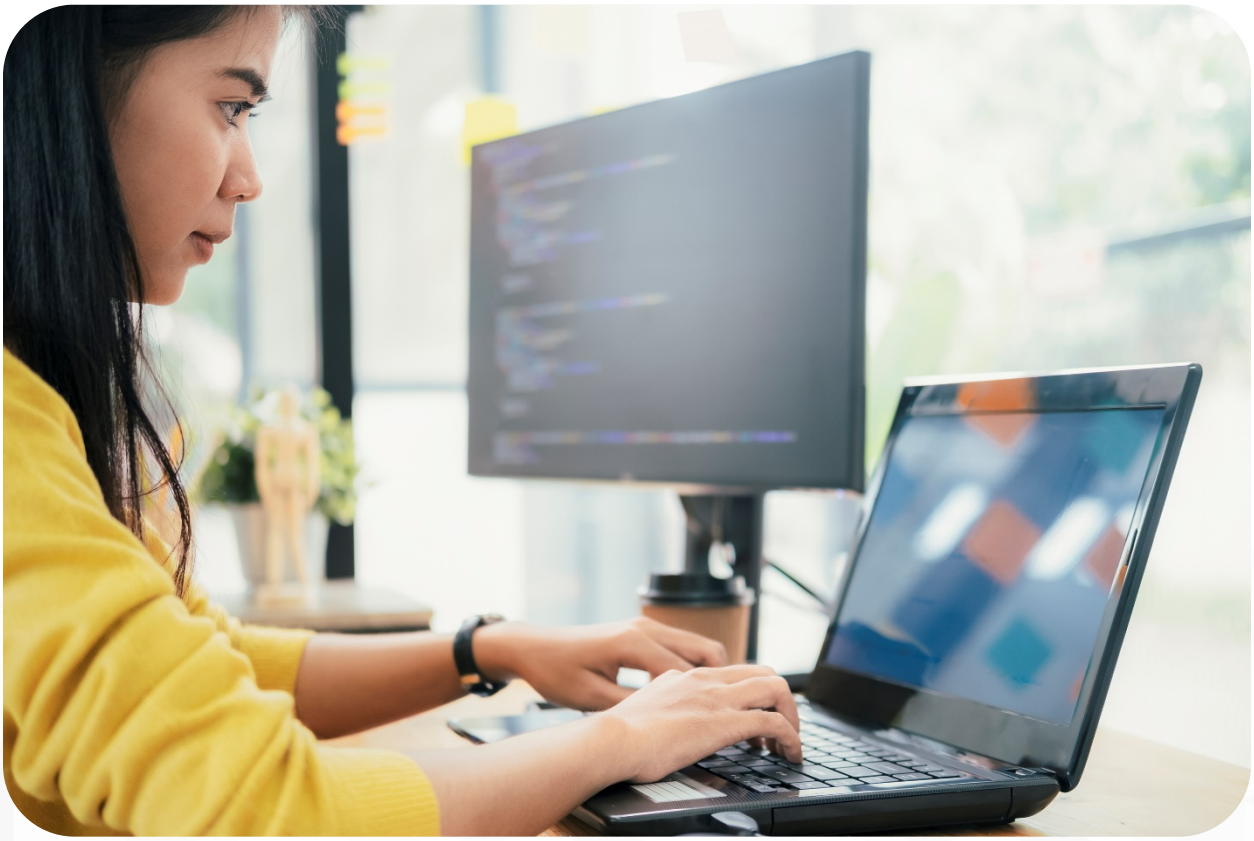
WHY DATA ANALYTICS?

The amount of data that is being generated and collected is ever increasing. With more and more companies and individuals gathering data every day, the need for Data Analysts is on the rise. Since the demand for skilled Data Analysts is higher than the supply of people who can truly do this job well, this profession has the potential to command large salaries and excellent perks even at entry-level.

The potential for growth is often one of the main reasons people seek this career path. Not only are there different skill levels to advance through (entry-level, mid-level, senior level), but there are also a vast number of subcategories within the data analytics field to choose from. Each subcategory has a basis in data analytics, but will have different data types, programs, and unique focuses. For example, Health care Analyst, Marketing Analyst, Business Analyst, Business Intelligence Analyst, and Operations Analyst. There are so many career paths within data analytics, these examples are just the tip of the iceberg!

Let's be honest money is one of, if not the biggest, motivator for anyone to work harder in their career. In fact, it's probably the only reason most of us work every day. That potential for growth in data analytics brings along increased salaries as you progress within your career. As of writing this, the average entry-level Data Analyst salary is $62,000, mid-level at $80,000, and of course senior level is pushing $100,000+ a year. That's roughly a $20,000 increase in salary every time you make an advance in your career. Many people in other fields would be lucky to make that much of an increase just once within the lifetime of their career. On top of great salaries, most tech jobs offer fantastic benefit packages that often include 8-11% annual bonuses. Most Data Analyst jobs also offer remote work which might just be the cherry on top for many people entering the field.

WHAT TO LEARN?



Everyone has a different pre-existing skill set, so I am going to base this information on my experience of having no prior data or tech experience at all. Here is the tech stack that I learned before landing my first Data Analysist role: Python, PowerBI, SQL, and Excel. I did learn them in that exact order which I do not recommend doing. Having no experience, a quick Google search on what to learn lead me to doing them in that order, but when I actually started applying for jobs it quickly became apparent that I had learned them in the opposite order than what I would recommend now. Learn Excel, then SQL, then PowerBI, and finally Python if you're feeling fancy. I will go into detail on why learning each one of these is important, but I do want to note that in order to fast-track yourself for an entry-level position, you only really need to learn Excel and SQL.

EXCEL

Knowing either Excel and/or Google Sheets is an absolute must. Whether you join a small business or FAANG, you will most likely be in one of these spreadsheets every day as a Data Analyst. These spreadsheets are so useful for completing everything from ad hoc requests to full reports. Keep in mind that which program is used is purely preference of the company. While it can be helpful to know both, once you master one, the other is pretty easy to pick up on. One of the downsides to these programs is that they can be SLOW. When working with large datasets or even using a lot of formulas, your spreadsheet will get slower and slower. That's where the second most important skill to know comes in handy.

SQL

This happens to be my favorite to work with. SQL stands for Structured Query Language. It makes getting data from databases so much faster! It is also very easy to learn when you are just starting out. Knowing SQL is important when working in the real world because not all your data lives within one table or spreadsheet, so you need to know a way to connect separate tables (with JOINS) to each other. Then if you are eventually exporting data to Excel, you can use it to filter down the data to a manageable amount as well.

With the two skills listed above, you will have enough skills to dive right into applying for jobs. The next two are completely optional but can help you build your resume and enable you to cast a wider net when applying for jobs.

BI TOOL

There are two powerhouses when it comes to BI tools: PowerBI and Tableau. Personally, I enjoy PowerBI more, but Tableau is nice to know as well. There are pros and cons to both, but a quick Google search can help you pick which one is best for you. BI tools pull data from multiple sources into a data warehouse and then analyze the data according to use queries, drag-and-drop reports, and dashboards. Using either of the mentioned BI tools will make life a lot easier and the dashboards you create will look amazing.

PYTHON

Look at learning Python as a long-term goal. It might take just as long to learn as it does to learn the other 3 skills I mentioned combined. There are full careers as a Python Developer that make $100,000+ a year, so this is a whole separate beast to tackle. Adding Python to your skillset can help you stand out and will help you transition to a more senior level position as you gain experience. Knowing and using Python would allow you to automate a lot of tasks and be more versatile in how you analyze data. It's also extremely fast which makes processing quicker, saving the company time and money.

WHERE TO LEARN

There are plenty of places online to learn all the skills mentioned above but not all of them are created equal in content, quality, or price. I'll cover both paid and free resources. The paid way might even be more inexpensive than you think!

FREE RESOURCES

When you are on a budget it can be difficult to find good resources to learn from, but thankfully there is plenty of content on YouTube! While YouTube is free and there is a lot you can learn from different channels, the downside is that you will need to search video by video and it can feel like trying to learn without a sense of direction.

Luckily, there are a few channels that offer their content for free in a nice course-like fashion.

- Excel - freecodecamp, Intellipaat
- SQL - freecodecamp, Intellipaat, Simplilearn
- PowerBI – Simplilearn, Edureka
- Python – freecodecamp, Edureka, Simplilearn

These are some of my favorite YouTube channels to learn from. Of course, there are more out there but that should get you started!

PAID RESOURCES

I would highly recommend buying a course if you have a few dollars to do so. Think of it as investing in yourself. Paid courses have in depth, quality content, and a huge community behind each platform to further your learning experience.

Udemy – This is my all-time favorite platform to learn from. Lectures are chunked down into bite-sized videos that are easier to digest and understand. Lectures also give you to option to ask a question and get help from the vast community involved. Some of the more popular lecturers have virtual assistants that help answer questions and often other students might chime in as well! Something to keep in mind with Udemy is that it's easy to get a good discount on courses. If you create a new account, you will have a discount of 90% off all the courses I am about to mention. I never pay full price for a course as you can find many different courses on sale from time to time as well. The most expensive course listed below is $16.99. Besides getting great courses at an inexpensive cost, another reason I recommend Udemy is that you will have access to these courses forever and can refer back to them as needed in your learning journey. Here are the EXACT courses I took and can personally recommend to help you become a Data Analyst.

- Excel – Microsoft Excel – Excel from Beginner to Advanced by Kyle Pew
- SQL – The Complete SQL Bootcamp 2022: Go from Zero to Hero by Jose Portilla
- PowerBI – Microsoft Power BI Desktop for Business Intelligence by Maven Analytics
- Python – Python for Machine Learning and Data Science Masterclass by Jose Portilla

Don't want Udemy? There are other places like DataCamp, Coursera, Maven Analytics, but these places charge a monthly rate. The pro to these sites is that you have access to all their courses and can take as many as you want, but the con is that you lose access to all of it when you stop paying the monthly rate.

PROJECTS

Projects are the absolute best way to put all your skills to the test! You will find pretty quickly that you need hands on practice before you start doing interviews. Most courses or videos are meant to teach you the fundamentals and doing projects is good way to solidify that knowledge by putting it to use. I recommend starting hands on projects as soon as possible.

WHERE TO FIND PROJECTS?

I get asked this question a lot and it couldn't be any easier to get started. You can start by going to Kaggle.com. Search through their free datasets and start performing some data exploration. They also hold contests in which you could land a good amount of money if you win! The only problem with creating projects from these datasets is just that, you must create the project. A Data Analyst solves problems and if you have trouble creating a problem for yourself to solve, you might want to try something else. This is where Maven Analytics comes into play. They offer a free dataset every single month along with real-world problems to solve! I highly recommend following them on LinkedIn because they run a monthly contest to win a 1-Year subscription to their site. You can also see other people's entries to get inspiration!

Building amazing dashboards is a project I highly recommend working on. It shows off your skills and provides a bit of eye-candy for hiring managers. I'll go over ways to showcase your projects in the next section.

PORTFOLIO

In every article or video about becoming a Data Analyst you will see that having a portfolio is required. I will go over how I set myself up to showcase my skills and projects, but I want to mention that not a single hiring manager looked at my portfolio. I recommend having a way to showcase your skills, but it is not necessary to have this built out completely before you start applying for jobs.

Tableau – Creating dashboards on Tableau Public is fantastic (and free!) because you also have access to a public link for your portfolio that you can put right on your resume if you'd like.

GitHub pages – You can also host a portfolio website right from your GitHub account (also free!). This is where you can put projects that showcase your SQL knowledge or any other repository you have. This is great if you do more than just Tableau like I did. Head over to https://pages.github.com/ to check it out. There are plenty of resources out there if you need help setting it up. Check out YouTube for "How to set up GitHub Pages" and you'll have a full walkthrough.

Setting yourself up on Tableau Public and Github are great ways to show off your skills, but you should also have PDFs of all your dashboards ready in case a hiring manager never clicks on your links and instead asks to see some examples during an interview.

RESUME

I have seen hundreds of resumes and let me tell you, a lot of them stink. More than 80% of them needed a full overhaul. A resume is the first thing a Hiring Manager sees, so having one that stands out is just as important, if not more, than the technical abilities you have listed on it.

You should start with a design that is completely ATS compliant and looks great with pops of color. Most resume building websites out there are ATS compliant and can yield you the results you want. For the exact website I used to land my Data Analyst job, head over to https://bit.ly/39CV4PH . Keep in mind that you want to keep your resume length to one page. If you must, you can push it to 1.5 pages, but I wouldn't recommend any more than that. Hiring managers or vetting agents have so many resumes to go through, especially in this field, that they do not have time to review 4 pages of work history that are irrelevant to the job you are applying for.

Once you choose a design, you will need to fill in all your information and make sure that what is on it is relevant information. It might be easier to just show you the exact resume that landed me my first Data Analyst role.

IAN KLOSOWICZ

Data Analyst

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SUMMARY

Adaptable Data Analyst skilled in gathering, interpreting, and analyzing data in a fast-paced environment. Advanced proficiency in all aspects of Excel. Experienced in preparing detailed documents and reports while managing complex internal and external data analysis responsibilities.

WORK HISTORY

Technical Account Manager

Greytruck!

01/2015 - 02/2017

Software Development/ SaaS

- Lead digital marketing initiatives on new product releases
- Created drip-campaigns and custom email templates which lead to higher than expected CTR
- Collaborated with government agencies to integrate databases via API
- Constantly performed QA tests to ensure data quality
- Performed software training and fixed technical issues via ticket system

Lead Print Press Operator

Fibertex Personal Care

11/2020 - Ongoing

Nonwoven personal care products

- Manage a team to maintain a proficient production schedule.
- Troubleshooting and improve Excel worksheets to maintain standards.
- Communicate with stakeholders to handle scheduling and discuss process improvements.

Press Operator

Graphic Mailers

02/2017 - 11/2020

Print Shop

- Operate and maintain multiple large digital presses.
- While having a high degree of attention to detail, I achieved an increase in efficiency by leading other press operators and prioritizing job orders.
- Suggested and improved workflow from a technical and physical standpoint.
- Achieved HP certification.

CERTIFICATES

Microsoft Excel (Advanced)
View Certificate

Complete Digital Marketing
View Certificate

The Complete SQL Bootcamp 2022
View Certificate

Microsoft Power BI Desktop for Business Intelligence
View Certificate

TECH STACK

Microsoft Excel | Power BI | MySQL Server | Python | Business Intelligence | Data Cleaning

MY TIME

A Client-focused
B Attention to detail
C Continuous learning
D Networking

As you can see, you can fit a lot onto one page. I highly recommend using my resume as a guide. Even if you do not use this exact design, please highlight points of interest with color and use **bold** where it adds value to the layout.

When plugging in your information, if you do not use the right keywords, you are less likely to get your resume seen. For example, I was applying to a Data Analyst role that deals with a lot of marketing data. You will see I used words like “digital marketing”, “technical”, “CTR”, “Excel”, “data quality”, “troubleshooting”, “prioritize”, and “attention to detail”. Many companies have vetting agents or programs that skim resumes for particular keywords and those without relevant keywords do not get seen by hiring managers. When using your own information, you need to use relevant keywords for the field of analytics you are applying for. The more keywords, the more likely it is that your resume will be seen. Not only will you get more calls to schedule interviews, but you will also be contacted more often by recruiters.

APPLYING TO JOBS

This part is one of the most crucial areas where you need to be consistent. There are hundreds of Data Analyst jobs posted every day with tons of competition. A job can be posted and taken down in the same day so if you weren't on the job board for a day, you could have missed out on applying for a position that you may have gotten.

There are two places that are perfect to apply for jobs in this field. They are also what I used to apply for Data Analyst jobs and where recruiters found my resume and reached out to me. Indeed is great for local job opportunities and LinkedIn for both remote work as well as more local jobs. Indeed search results are heavily based on where you live so LinkedIn is probably better suited for the majority of people, especially those looking for remote work.

Now, I mentioned that you need to be consistent about the applying process. If you are consistently on the job boards, you will be able to apply for a position right when they are posted. The sooner you can get your application in, the better chances you have of getting eyes on your resume. I always filtered my job listings to show the most recent and only up to 3 days old.

Anything after 3 days is most likely going to be flooded with applications. Feel free to apply to them anyways, but I personally didn't want to waste my time. I knew I had less experience than many others applying for the same positions and that if a listing was already flooded, it would be less likely that I would win out over the competition. Remember the main goal is to be fast and get into tech sooner rather than later.

Keep in mind that applying for Data Analyst positions will be a "numbers game". It took me upwards of 100+ applications before I landed my job. I have seen some people try for months without an interview. I'm going to tell you exactly how not to end up like one of those people. After you have sent out your first 30 applications, take a step back and look at the data you have generated. How many companies looked at your resume, how many called you, and how many interviews did you land?

If you are not happy with the results, you need to adapt. This is where many fail because they see that their skills are good enough for the position and never look more in depth to see that they need to change! Adapt by switching up the keywords on your resume. It's the keywords that get your resume views and it's your technical skills that get you an interview. Being personable, having a well-rounded personality, and a go-getter attitude can also go a long way with the right recruiter or hiring manager.

Another way to help speed up your applying process is to work with multiple recruiters. Their job is to hire candidates for companies so utilize them to help you find jobs too! You will need to reach out to technical recruiters, not just any recruiter. Also, you will need to reach out to multiple before one even responds, again it's a numbers game. Have a friendly greeting and a goal for your first message to recruiters ready to go.

The last recommendation I have is to reach out to hiring managers directly after applying. If you see who posted the job on LinkedIn, connect with them and send them a message or email with your resume and ask if they had a chance to look at it yet. I feel like no one does this, but it has landed me most of my jobs. A follow up to applying makes you stand out that much more! Keep in mind that not every person you reach out to this way will respond to you and that's okay. You don't want to pester them if you do not hear back.

INTERVIEW PREP

Maybe you feel more confident than I do, but interviews are the most nerve-racking part of the process for me. To compensate for my nervousness, I researched tech interview questions, procedures, and methods, then studied my butt off. To condense what I learned from that I'll talk about what I believe to be the absolute best way to help with the interview process.

This method is called the STAR method. It stands for Situation, Task, Action, Result. You can use this technique to prepare for behavioral and situational interview questions. It gave me the ability answer every single interview question with confidence and precision. Learning this method also gave me the confidence to answer questions I had not prepared for without hesitation.

Take some time to Google some STAR questions. Pick 10 questions that pertain to you or that you feel you would be unprepared to answer and literally write out answers to them.

To start, you set the stage for the answer using Situation. It's best to describe relevant work situations but depending on transferable experience, it might be best to describe a situation with a project you have completed.

Next is Task, you need to describe the task at hand during the situation. Use roughly 1 to 2 sentences for this. What Hiring Managers really want to know is how you handled the situation.

This is where Action takes place. Explain the relevant actions you took to handle the situation. Use words like "I" instead of team because they are hiring you and not your team.

Lastly, Results. This section solidifies why your actions were the right thing to do. In addition, discuss what you learned, how you grew, and why it was important.

Here are some questions and answers I personally used...

1. HAVE YOU EVER HAD TO WORK UNDER A TIGHT DEADLINE?

Yes. In manufacturing and production tight deadlines happen frequently. One good example is trial runs of flexo-print jobs. Typically, a customer is set to arrive at the plant to inspect their sample at 10:00am. Our shift starts at 7:30am to produce the sample before the customer arrives. With efficiency in mind, I take 10 minutes at the beginning of the shift to meet with my team and assign each team member proper tasks based on their strengths in order to make sure we have a high-quality sample completed before 10:00am.

2. TELL ME ABOUT A TIME WHEN YOU HAD THE LIBERTY TO BE CREATIVE WITH YOUR WORK.

When I worked in software sales, I had the liberty to be as creative as I wanted with the data, I had to show potential clients. I really enjoyed making charts and comparison graphs to show potential clients what our software could do for them. Although it wasn't a necessity, I found that showing the data in more appealing and easier to read visuals helped get them on board and I made more sales.

3. DO YOU USUALLY SET GOALS AT WORK? IF YES, COULD YOU GIVE AN EXAMPLE OF A GOAL YOU HAD AND HOW YOU ACHIEVED IT?

I set goals for myself all the time, especially when it comes to work. At my current job, they recently began posting the company wide production records. I made it a goal for my team to have the highest production record. In order to beat the existing record, our team needed to move quickly during maintenance machine cleanings in order to keep our machines running while maintaining quality. I communicated with my team to ensure that everyone understood the importance of minimizing downtime so that everyone was on board to achieve this goal. Not only did we beat the company wide record, but months later my team still maintains this record and I received employee of the month for my efforts.

After you have written your questions and answers down, make sure to practice them over and over. Take time to review, revise, and memorize the gist of your answers so that you feel prepared to answer similar questions without hesitation during interviews. Not only do you need to practice these types of questions, but you also need to keep up with practicing your tech stack on a daily basis. It would be awful to get to a technical interview and then you've forgotten some of the basics of Excel because you haven't touched it in weeks or months.

NETWORKING

This part of your career roadmap is optional. While it will be beneficial in the long run, it is not necessary. Networking can also help you stay motivated. If you start reaching out to other aspiring Data Analysts, you will be able to connect and talk about what's working and what's not. There is a sense of comfort seeing and connecting with other people going through exactly what you are going through.

Joining a data community can also help you stay motivated and give you more to learn from experts. There are great ones out there and if you want to be a part of the one I'm in, look up dataxp.ai or message me and I'll send you an invite to the Discord server! You will eventually start helping other new people and start to realize that you really are making good progress in your skill set.

CONCLUSION

Figuring out exactly how to get started in data analytics can feel intimidating, but if you take it one section at a time, or even just one day at a time, you'll get through it before you know it. In my experience, the journey can feel like a long one, but the end result is worth every bit of struggle along the way. It took me nearly a year to find all the resources and platforms that I needed to successfully land a job as a Data Analyst. This eBook is meant to lessen that search and the struggle to find solid resources for others. Take into consideration that this eBook is simply a guide based on my personal experience and this information may not work for everyone. Even if it's not all for you, it will give you a starting point and show you the important aspects to focus on in your journey to becoming a Data Analyst.