The Data Analyst Role

**Responsibilities of a Data Analyst**

While the role of a Data Analyst varies depending on the type of organization and the extent to which it has adopted data-driven practices, there are some responsibilities that are typical to a Data Analyst role in today’s organizations.

These include:

* Acquiring data from primary and secondary data sources,
* Creating queries to extract required data from databases and other data collection systems,
* Filtering, cleaning, standardizing, and reorganizing data in preparation for data analysis,
* Using statistical tools to interpret data sets,
* Using statistical techniques to identify patterns and correlations in data,
* Analyzing patterns in complex data sets and interpreting trends,
* Preparing reports and charts that effectively communicate trends and patterns,
* Creating appropriate documentation to define and demonstrate the steps of the data analysis process.

**What are the qualities and skills required to be a Data Analyst?**

Soft skills:

* Curiosity – Ask a lot of good questions
* Thoughtfulness
* Ability to understand both user and co-worker perspective and what they most need from the data
* Willingness to learn – because analytics is a fast moving field, so have to constantly be learning and reading to stay on top of it

Technical skills:

* SQL – for extracting data
* Python or R programming languages
* At least one data visualization tool

**A Day in the Life of a Data Analyst**

A day in the life of a Data Analyst can include a number of possibilities — from

* acquiring data from varied data sources
* to creating queries for pulling data from data repositories,
* foraging through rows of data to look for insights,
* creating reports and dashboards, and
* interacting with stakeholders for gathering information and presenting the findings, it’s a spectrum. And yes,
* the big one — cleaning and preparing the data so that the findings have a credible basis — which, by the way, is a large part of what any Data Analyst may find themselves doing in their jobs.

**Summary and Highlights**

In this lesson, you have learned the following information:

The role of a Data Analyst spans across:

* Acquiring data that best serves the use case.
* Preparing and analyzing data to understand what it represents.
* Interpreting and effectively communicating the message to stakeholders who need to act on the findings.
* Ensuring that the process is documented for future reference and repeatability.
* In order to play this role successfully, Data Analysts need a mix of technical, functional, and soft skills.

Technical Skills include varying levels of proficiency in using spreadsheets, statistical tools, visualization tools, programming and querying languages, and the ability to work with different types of data repositories and big data platforms.

An understanding of Statistics, Analytical techniques, problem-solving, the ability to probe a situation from multiple perspectives, data visualization, and project management skills – all of which come under Functional Skills a Data Analyst needs in order to play an effective role.

Soft Skills include the ability to work collaboratively, communicate effectively, tell a compelling story with data, and garner support and buy-in from stakeholders. Curiosity to explore different pathways and intuition that helps to give a sense of the future based on past experiences are also essential skills for being a good Data Analyst.