What does a day in the life of a data scientist look like? How would you define the role of a data scientist? How common do you find when researching this topic that data scientists end up doing a lot of reporting and analytics?

"Data Science is about solving problems, not building models."

Every day in the life of a data scientist can be a new challenge. There can be various factors that can decide how a day can look such as the type of company one is working for eg: Startups, global companies, the type of project one is working on, role within a team. One of the most crucial steps that every data scientist follows is to identify the business problem and define it by asking a lot of meaningful questions. Asking right questions is very important as they define the business problem and will help in decision making. Once the business problem is defined, the next step is to collect the required data that will help them to it. As part of this they may need to analyze different existing data sources to identify if the data they are looking for is available. If not, they need to collect new data either through feedback, interviewing, web scraping etc., Once this is done, data cleansing needs to be done by identifying any errors, removing duplicates, and detecting any missing values. Typically, a data scientist spends approximately 70% of his time doing this. After gathering all the data, data scientist explores the most effective and economical way of solving the problem at hand. If there are multiple ways to solve the problem, the best method needs to be decided. After deciding the approach, data scientist needs to perform an in-depth Analysis by applying different statistical models, algorithms and machine learning techniques to get valuable insights from the data. The next step crucial step is to communicate these findings to different stakeholders so that they can take decisions. Data scientists typically work with different data visualizations tools such as tableau, SAS, Matplotlib etc., to effectively communicate with their customers.

Data scientists typically get into many roles at their work, apart from being responsible for Business Intelligence, they are usually involved in building the data products, software platforms along with creating machine learning algorithms and creating visualizations. The role of a data scientist differs based on the kind of job he is doing. Data Scientists can be broadly divided into 4 categories.

**Data Theorists –** They spend a lot of time with statisticians and mathematicians and come up with algorithms.

**Data Engineers –** They understand different algorithms and adjust them as necessary to fit the business world problem. They spend lot of time running the programs, analyzing the results, and recommending changes to the current models, as necessary.

**Data Modelers –** Data modelers typically do not engage in creating the models or algorithms themselves. Instead, they engage in applying the finalized models on the business data to generate the results. They work with the Data Engineers to understand the strengths and weaknesses of various algorithms and models. Their emphasis is more on the integrity of the data, performance of the algorithms.

**Data Analysts –** They source data from different sources and clean the data so that the above steps can be performed. They usually run various processes to identify the duplicates and gaps in the data and fixing them.

To summarize, there are many different factors that decide how a day in life of data scientist can be and 70% of it will be spent on the coding which includes data cleaning, prototyping, creating the data visualizations and implementing the models in the real-world.

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