Alberto Andrés Valdés González.
Degree: Mathematical Engineer.
Work position: Data Scientist.
Mail: anvaldes@uc.cl/alberto.valdes.gonzalez.96@gmail.com
Location: Santiago, Chile.

Data Science Roles

Introduction

To every company or organization is very important create value through Data Science, and to do this is necessary many peolple and teams that fulfill differents roles and works and here we going to explain this different roles.

Data Analyst

As a typical entry-level position, a Data Analyst's primary job is to develop systems that collect and sift through company data, then use it to extract insights that answer business questions with actionable solutions. Individuals in this role should have a keen eye for detail and the ability to brainstorm new approaches to analyzing data. Often times, Data Analysts are tapped to work with a variety of departments and individuals, so collaboration and communication skills are a must, especially when explaining technical ideas to non-technical teams.

Responsabilities: Accessing and cleaning data, performing statistical analysis, visualizing and communicating the results.

Programming languages required: Python, R, SQL.

Tools/skills required: Data science programming, probability and statistics, collaboration, communication.

Growth Potential: Many Data Analysts go on to become senior analysts or take on a management role at larger companies with data teams.

Top industries: Finance, insurance, retail banking, consumer products, healthcare, energy.

Data Scientist

Think of a Data Scientist as taking the Data Analyst role another step further down the data science funnel. Data Scientists take on many of the same responsibilities as analysts, but they're also responsible for building machine learning models and working with algorithms to make accurate predictions based on collected data—ultimately making Data Analysts jobs a little easier. Of course, it's always good to know how analysis fits into the larger picture, and successful Data Scientists have a solid understanding of handling raw data, analyzing it and sharing insights in a compelling way. Since the role tends to be more independent, motivation and curiosity go a long way for these professionals.

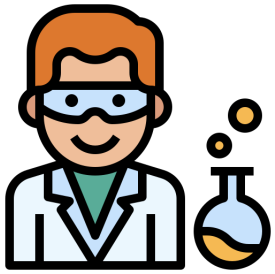
Responsabilities: Analyzing data, building and training machine learning models to make reliable future predictions.

Programming languages required: Python, R, SQL.

Tools/skills requiered: Everything required from a data analyst, plus strong foundations in math, analytics and computer science, knowledge of machine learning methods, statistical models, advanced data science programming and cloud computing (GCP, AWS or Azure).

Growth potential: Data Scientists may move on to become a senior data scientist, while some decide to take the path to become a machine learning engineer or a chief data officer.

Top industries: Finance, insurance, retail banking, consumer products, healthcare, telecommunications, energy, automotive.



Machine Learning Engineer

While Data Scientists build a company's machine learning models and Data Analysts determine which data is worthy of exploring, it's the Machine Learning Engineer who wrangles and applies the algorithms to the datasets. Usually, the ultimate goal for individuals in this role is to eventually create artificial intelligence. There's plenty of trial-and-error involved in the job, so persistence and resilience are key contributors to success. In addition, having a solid understanding of how long it takes to apply various approaches will also prove advantageous in this field.

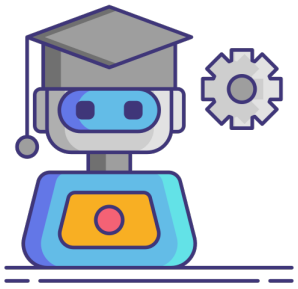
Responsabilities: Processing data provided by a company's Data Analyst using machine learning algorithms developed by the Data Scientist to glean insights that will ultimately drive business decisions.

Programming languages required: Python, R, SQL, Java, C++.

Tools/skills requiered: Strong communication paired with an understanding of data structures, vectors, matrices, derivatives and integrals, as well as statistical concepts and probability theory. Cloud Computing (GCP, AWS, Azure).

Growth potential: Growth potential: Many Machine Learning Engineers progress to become more specialized in deep learning methods, while others transition to machine learning researchers or leads on data science teams.

Top industries: Finance, insurance, retail banking, consumer products, healthcare, telecommunications, energy, automotive.



Software Engineer

Nowadays, most software companies want to leverage their users' data to optimize their offerings, while data-driven businesses have turned to creating custom software built around their specific needs or goals. That's where Software Engineers come in. Depending on the type of company, a Software Engineer might be tasked with optimizing certain product features based on user data, or they might be responsible for building a new program that will ultimately increase a company's bottom line. Needless to say, individuals holding these roles should be well-versed in programming and data analytics to truly be successful.

Responsabilities: Collaborate with data scientists to ensure alignment between the business objectives and the analytics back-end of the software they are working to produce or modify, as well as ensure the scalability and security of the final product.

Programming languages required: Java, Python, C, C++.

Tools/skills requiered: Experience with machine learning and deep learning frameworks, understanding of mathematics including linear algebra and statistics, strong programming and debugging skills, data processing, writing and communication and attention to detail.

Growth potential: Given the fact that this is a relatively new role within the industry, the opportunities for individuals holding this role are virtually endless.

Top industries: Finance, insurance, retail banking, consumer products, healthcare, telecommunications, energy, automotive.

All this document was based (and mostly copied) over the next page published by Berkeley.

https://bootcamp.berkeley.edu/blog/understanding-data-science-roles-who-does-what/
