datacamp

Curriculum cheat sheet

Discover the data skills your team needs to be successful

Gain an overview of the different roles within your organization and the trainings you can recommend tailored to their data skill level

Data roles overview

Use this page to compare common data roles. Determine which roles are applicable to your organization, then click the links to see which technologies and skills your staff need to learn.

Data consumers

need the skills to be able to make data-driven decisions, or have an informed conversation with a data professional.

Business analysts

are your bridge between using data to calculate things and applying the results to make money.

Data analysts

are focused on crunching the numbers, and need to know how to display and present findings from your calculations.

Data scientists

make discoveries, create insights from data and communicate these insights and discoveries to non-technical stakeholders.

Machine learning scientists

help computers learn without being explicitly programmed so that you can make predictions from your data.

Statisticians

provide the intellectual rigor behind your analyses, allowing you to avoid bad decisions from misunderstanding results.

Programmers

automate your business processes using data, improving productivity by reducing the repetitive tasks your team has to perform.

Data engineers

get the right data to the right people whenever they need it. They are responsible for collecting, cleaning, and cataloging data.

Data consumers

Data consumers need the skills to be able to make data-driven decisions, or have an informed conversation with a data professional.

SPREADSHEETS **tableau** SOFTWARE **THEORY** **Power BI**

Commonly uses the following technology and tools

Theory:
Non-coding data skills

Spreadsheets:
Google Sheets, Excel

Business Intelligence:
Tableau, Power BI

● **DATA SKILLS: BEGINNER**

- Understands what data scientists, machine learning scientists, and data engineers do.
- Knows which questions can (and can't) be answered with data.
- Interpret the results of data projects, including calculations and visualizations.

● **DATA SKILLS: INTERMEDIATE**

- Is able to calculate descriptive statistics.
- Can draw common data visualizations.
- Understands the business applications of data.

● **DATA SKILLS: ADVANCED**

- Has a strong grasp of the fundamentals of business intelligence

Recommended data skills learning path(s)

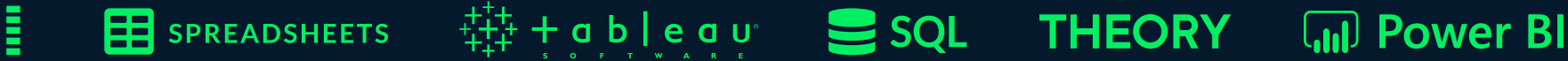**Data Literacy Fundamentals** →

🕐 10 hours 📖 5 Courses

Data Skills For Business →

🕐 20 hours 📖 7 Courses

Business analysts

Business analysts tie data insights to actionable results that increase business profitability or efficiency, often using BI tools. They have deep knowledge of the business domain.

SPREADSHEETS   tableau SOFTWARE   SQL   THEORY   Power BI

Commonly uses the following technology and tools

Spreadsheets:
Google Sheets, Excel

Business Intelligence:
Tableau, Power BI

SQL: PostgreSQL,
SQL Server, Oracle SQL

● DATA SKILLS: BEGINNER

- Is able to calculate descriptive statistics.
- Can draw common data visualizations.
- Understands the business applications of data.

● DATA SKILLS: INTERMEDIATE

- Has a deep knowledge of the business domain.
- Is able to report and communicate using data.

● DATA SKILLS: ADVANCED

- Can create dashboards.
- Organizes data to solve business questions.

Recommended data skills learning path(s)

Spreadsheets Fundamentals →

🕐 15 hours   📖 4 Courses

Tableau Fundamentals →

🕐 24 hours   📖 5 Courses

Data analysts

Data analysts sit between business intelligence and data science, using a combination of coding and non-coding tools to analyze data and report insights from their analysis to business stakeholders.

R   python™   ✦tableau   ⬢ SQL   ⋮   ⊞ SPREADSHEETS   Power BI

Commonly uses the following technology and tools

Programming languages:
Python, R

Business Intelligence:
Tableau, Power BI

Spreadsheets:
Google Sheets, Excel

SQL: PostgreSQL, SQL Server, Oracle SQL

DATA SKILLS: BEGINNER

- Is able to calculate descriptive statistics.
- Can draw common data visualizations.
- Understands the business applications of data.

PREPARE FOR CERTIFICATION

Data Scientist
with Python

35%
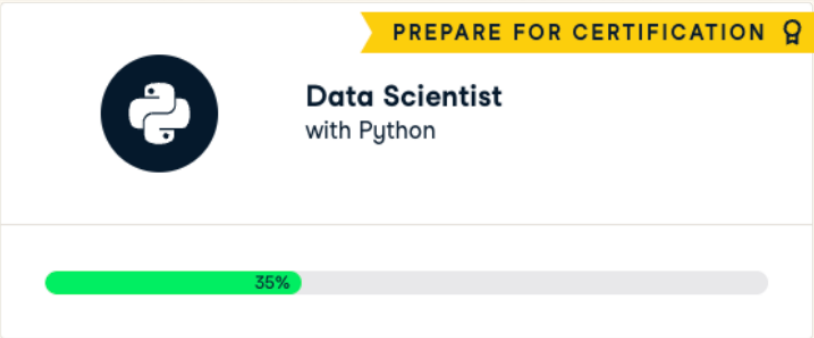
DATA SKILLS: INTERMEDIATE

- Perform the data analysis workflows, including:
- Importing, manipulating, cleaning, calculating, and reporting on business data.
- Has a strong grasp of the fundamentals of business intelligence.

DATA SKILLS: ADVANCED

- Can create dashboards.
- Organizes data to solve business questions.

Recommended data skills learning path(s)

Data Analyst with Python →

🕐 66 hours   📖 17 Courses

Data Analyst with R →

🕐 77 hours   📖 19 Courses

Data Analyst with SQL →

🕐 41 hours   📖 10 Courses

Data scientists

Data scientists make discoveries, create insights from data and communicate these insights and discoveries to non-technical stakeholders.

R python™ SQL

Commonly uses the following technology and tools
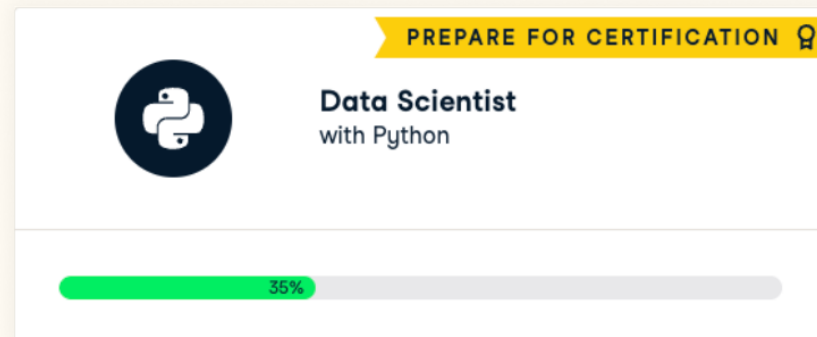
Programming languages:
Python, R

SQL: PostgreSQL,
SQL Server, Oracle SQL

Big data tools:
Airflow, Spark

● DATA SKILLS: BEGINNER

- Perform the data analysis workflows, including:
- Importing, manipulating, cleaning, calculating, and reporting on business data.
- Understands the business applications of data.

PREPARE FOR CERTIFICATION
Data Scientist with Python
35%

● DATA SKILLS: INTERMEDIATE

- Understands fundamental statistics, including distributions, modeling, and inference.
- Designing simple experiments such as A/B tests.
- Can create dashboards.

● DATA SKILLS: ADVANCED

- Applies analyses to business applications such as finance, marketing, and healthcare.
- Understands supervised and unsupervised machine learning workflows.
- Work with non-standard data types, such as time series, text, geospatial, and images.

Recommended data skills learning path(s)

Data Scientist with Python →
🕐 88 hours   📖 23 Courses

Data Scientist with R →
🕐 88 hours   📖 22 Courses

Machine learning scientists

Machine learning scientists help computers learn without being explicitly programmed so that you can make predictions from your data.

R python™ SQL

Commonly uses the following technology and tools

Programming languages: Python, R

SQL: PostgreSQL, SQL Server, Oracle SQL

- ● **DATA SKILLS: BEGINNER**

  - Perform the data analysis workflows, including:
  - Importing, manipulating, cleaning, calculating, and reporting on business data.
  - Understands the business applications of data.

- ● **DATA SKILLS: INTERMEDIATE**

  - Performing supervised and unsupervised machine learning workflows: feature
  - engineering, training models, testing goodness of fit, making predictions.
  - Applies analyses to business applications such as finance, marketing, and healthcare.

- ● **DATA SKILLS: ADVANCED**

  - Perform deep learning workflows.
  - Work with non-standard data types, such as time series, text, geospatial, and images.

Recommended data skills learning path(s)

Machine Learning Scientist with Python →

🕐 93 hours   📖 23 Courses

Machine Learning Scientist with R →

🕐 108 hours   📖 27 Courses

Statisticians

Statisticians provide the intellectual rigor behind your analyses, allowing you to avoid bad decisions from misunderstanding results.

R · python™ · SQL

Commonly uses the following technology and tools

Programming languages:
Python, R

SQL: PostgreSQL,
SQL Server, Oracle SQL

Big data tools:
Airflow, Spark

● **DATA SKILLS: BEGINNER**

- Perform the data analysis workflows, including:
- Importing, manipulating, cleaning, calculating, and reporting on business data.
- Understands the business applications of data.

● **DATA SKILLS: INTERMEDIATE**

- Perform statistical modeling workflows, including feature engineering, training
- models, testing goodness of fit,and inferring significance.
- Test hypotheses and design simple experiments such as A/B tests.

● **DATA SKILLS: ADVANCED**

- Design more complex experiments and understand Bayesian statistics.
- Understand specialist models, such as survival models, generalized additive models, mixture models, structural equation models.

Recommended data skills learning path(s)

Statistician with R →

🕐 56 hours   📖 14 Courses

Statistics Fundamentals with Python →

🕐 19 hours   📖 5 Courses

Programmers

Programmers automate your business processes using data, improving productivity by reducing the repetitive tasks your team has to perform.

R   **python**   **Scala**   **>_ Shell**   **git**

Commonly uses the following technology and tools

Programming languages:
Python, R, Scala

Command line tools:
Shell, Git

● **DATA SKILLS: BEGINNER**

- Write functions to avoid repetitive code.
- Benchmark and optimize code to improve performance.

● **DATA SKILLS: INTERMEDIATE**

- Test code.
- Work with web APIs.
- Develop packages for sharing code.

● **DATA SKILLS: ADVANCED**

- Develop data pipelines and work with parallel programming.
- Understanding programming paradigms, such as functional programming and object-oriented programming.

Recommended data skills learning path(s)
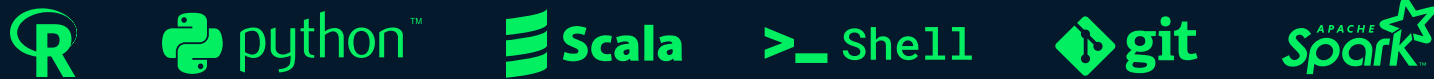
Python Programmer →

🕐 59 hours   📖 15 Courses

R Programmer →

🕐 44 hours   📖 11 Courses

Data engineers

Data engineers get the right data to the right people whenever they need it. They are responsible for collecting, cleaning, and cataloging data.

R   python™   Scala   >_ Shell   git   Spark

Commonly uses the following technology and tools

Programming languages:
Python, R, Scala

Command line tools:
Shell, Git

Workflow management:
Airflow

Big data processing:
Spark, AWS Cloud

● **DATA SKILLS: BEGINNER**

- Efficiently extract, transform, and load data.

● **DATA SKILLS: INTERMEDIATE**

- Process data and automate data flows using the command line.
- Process data in the cloud.

● **DATA SKILLS: ADVANCED**

- Manage and optimize SQL and NoSQL databases.
- Process big datasets.

Recommended data skills learning path(s)

**Data Engineer
with Python** →

🕐 73 hours   📖 19 Courses

**Big Data with
PySpark** →

🕐 24 hours   📖 6 Courses

**SQL Server for
Database Admins** →

🕐 24 hours   📖 6 Courses