

Data Analyst Skills & Concepts Checklist

(Beginner)

67 Skills & Terms to Know
for Beginner Data Analysts

Data analysis is a vast discipline encompassing a wide range of skills and concepts—and it’s growing constantly. It can be overwhelming, and many analysts feel they struggle to wrap their head around it all.

That said, data analysis consists of a small set of fundamental skills and concepts. It’s just very difficult to find that information all in one place.

In most cases, analysts spend several years building up this knowledge on the job. That’s because universities don’t focus on the fundamentals—they jump right into complex topics like artificial intelligence (for reasons I don’t know)!

That’s why I created this checklist. Whether you’re new to data or several years in, this checklist shows you a range of skills and concepts you need to know—the fundamentals. Use it to gauge your proficiency in less than 20 minutes.

If you’re not comfortable with all these items, you could be limiting your potential. So, take a look at the checklist!

Skills

Excel

1. Formatting—when to color cells black and [neon blue](#).....
2. Aggregating only visible cells with a function.....
3. Adding values in an array using a function.....
4. Taking the arithmetic mean of values in an array using a function.....
5. Locating the smallest value in an array using a function.....
6. Locating the largest value in an array using a function.....
7. Counting values in an array using a function.....
8. Counting **distinct** values using a function and calculated fields.....
9. Conditional aggregations.....
10. Combining text from multiple cells into one cell with a function (usually for primary keys).....
11. Using functions to “slice and dice” sub-pieces of cell text.....
12. Measuring the length of characters in a cell.....
13. Quickly returning a value at a pre-defined location with 3 different functions based on use case.....

PivotTables

- 1) Table calculations.....
- 2) Aggregations directly in value fields.....
- 3) Calculated fields.....
- 4) Calculated field aggregation limitations.....
14. Keyboard shortcuts for speed (check out this [article](#)).....
15. Structuring etiquette (single summary page, data in standalone tab, etc.).....
16. Visualizing the magnitude of two value in one dimension.....
17. Visually emphasizing the magnitude of two values in one dimension.....
18. Visualizing change of one or more variables over time.....
19. Visually emphasizing the change of one or more variables over time.....
20. Visualizing the relationship between two variables.....

21. Visualizing contributions and reductions to a balance over time.....

Statistics

22. Variance (concise definition and practical application in Excel)

23. Standard deviation (concise definition and practical application in Excel)

24. Covariance (concise definition and practical application in Excel).....

25. Correlation (concise definition and practical application in Excel)

Terms and Concepts

Terms (Know their Definitions)

26. Data Analysis

27. Data

28. Data object.....

29. Data point.....

30. Dimension.....

31. Measure

32. Field.....

33. Attribute

34. Qualitative

35. Quantitative

36. Tabular

37. Data column

38. Granularity

39. Data row

40. Aggregations.....

41. Data collection

42. Data cleaning

43. Data processing.....

44. Data interpretation

45. Data visualization

46. Unique IDs

47. Primary key.....

Concepts

48. 6 Aggregation functions.....

49. Data manipulation.....

50. Function vs formula.....

51. Arithmetic mean vs average.....

52. Benchmarked Correlation vs Unbound Covariance.....

53. Data table vs data set.....

54. The data cycle.....

55. Data analysis types.....

- 56. Data analysis methods
- 57. Data analysis techniques
- 58. 5 essential charts
- 59. Why pie charts are not useful
- 60. Asking good questions for data analysis
- 61. Parts of a good question for analysis
- 62. What makes a *bad* question for analysis
- 63. The two core divisions of data analysis and their methods
- 64. Descriptive analysis
- 65. Predictive analysis
- 66. Diagnostic analysis
- 67. Prescriptive analysis

So, how did you do?

If you don't know most of the items on this list, then you're probably missing critical topics to be a strong analyst.

At AnalystAnswers.com, I wrote an eBook with these items in mind, and it's not a heavy textbook-style book that breaks the bank with little practical value. The [Introduction to Data Analysis](#) is a concise 50+ pages, loaded with images and examples, and comes with an Excel aid to get you going from day 1.

Check it out [here!](#)