

12-Week Data Analyst Roadmap

Goal: Go from Beginner to Job-Ready Data Analyst in 3 Months

☑ Week 1: Introduction to Data Analytics

- What is Data Analytics?
- Types: Descriptive, Diagnostic, Predictive, Prescriptive
- Roles: Analyst vs Scientist vs Engineer
- Workflow Overview (Ask → Prepare → Analyze → Share → Act)
- Structured vs. Unstructured Data

📖 Resources:

[Data Analytics and Its types](#)

[Linkedin - intro to Workflow](#)

☑ Week 2: Excel for Analysis

- Core Functions: **VLOOKUP**, **INDEX**, **MATCH**, **IF**, etc.
- Sorting, Filtering, Conditional Formatting
- Pivot Tables & Charts
- Excel Dashboards Basics

📖 Resources:

[Excel Playlist 1](#)

[Excel Playlist 2](#)

[Microsoft Excel for Data Analytics - FreeCodeCamp](#)

☑ Week 3: SQL Essentials

Basics: **SELECT**, **WHERE**, **GROUP BY**, **ORDER BY**

Joins: **INNER**, **LEFT**, **RIGHT**, **FULL**

Subqueries & CTEs

Window Functions ([RANK\(\)](#), [ROW_NUMBER\(\)](#), etc.)

Resources:

[SQLBolt](#)

[Mode SQL Tutorial](#)

[SQL from Scratch](#)

[10Hr SQL Course](#)

Week 4: Python for Data Analysis

- Python Basics: Lists, Loops, Functions
- Pandas: [read_csv](#), [groupby](#), filtering, merging
- Matplotlib & Seaborn for Visualization
- Mini EDA Projects

Resources:

[Python for Data Analytics - Geeksforgeeks](#)

[Python for DA - YouTube](#)

[Links - Numpy, Pandas](#)

Week 5: Statistics & Probability

- Central Tendency & Spread: Mean, Median, Std. Dev
- Normal & Binomial Distributions
- Probability Rules & Bayes Theorem
- Hypothesis Testing: [p-value](#), [z/t-tests](#)

Resources:

[Khan Academy – Statistics](#)

[StatQuest with Josh Starmer \(YouTube\)](#)

[Stats & Probability](#)

☑ Week 6: Data Cleaning

- Handling Missing Data: `fillna()`, `dropna()`
- Outlier Detection (IQR, Z-score)
- Data Types & Transformations
- Regex for Cleaning

📖 Resources:

[Data Cleaning - Kaggle](#)

[Python Regex Guide - RealPython](#)

☑ Week 7: Power BI Basics

- Creating Dashboards
- Using Slicers, Filters
- DAX Introduction
- Publishing to Power BI Service

📖 Resources:

[Microsoft Power BI Learning](#)

[Power BI for Beginners - YouTube \(Simplilearn\)](#)

☑ Week 8: Advanced Excel & BI

- Time Intelligence Functions (`YTD`, `MTD`, `PARALLELPERIOD`)
- Performance Optimization Tips

- Drillthrough & Bookmarks in Power BI

Resources:

[MyExcelOnline Advanced Excel](#)
[Power BI Advanced Playlist \(Guy in a Cube\)](#)

Week 9: Business Acumen

- Key Business Metrics (KPIs, ROI, CLTV)
- Domain Knowledge: Sales, Marketing, Finance
- Storytelling with Data

Resources:

[Storytelling with Data Book \(Cole Nussbaumer\)](#)
[Harvard Business Review Analytics Articles](#)

Week 10: Real Projects & GitHub

- End-to-End Analysis Projects
- Examples: Sales Dashboard, Customer Churn, E-Commerce Sales
- Push to GitHub + README Writing

Resources:

[GitHub Docs](#)
[Kaggle Datasets for Practice](#)

☑ Week 11: Bonus Tools

- Jupyter Notebooks
- Google Sheets (QUERY, IMPORTRANGE)
- Tableau Basics
- Intro to APIs & Web Scraping ([requests](#), [BeautifulSoup](#))

📁 Resources:

[Jupyter Lab](#)

[Tableau Public](#)

[Web Scraping - RealPython](#)

☑ Week 12: Job Prep

- Resume Optimization for Data Roles
- Mock Interviews & STAR Method
- Most Asked Interview Questions

📁 Resources:

[Interview Query](#)

[StrataScratch - Interview SQL Practice](#)

[Glassdoor & LinkedIn Jobs](#)