

Data Analyst Roadmap

Building Profile & Portfolio Projects

This roadmap contains 8 Chapters that can be completed in 8 weeks, whether you are a fresher in the field or an experienced professional who wants to transition into Data Analysis.



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This is how we are going to prepare for the Data Analyst profile:

- 1 - Python Programming
- 2 - Understanding NumPy
- 3 - Exploratory Data Analysis (EDA) with Pandas
- 4 - Data Visualization with Matplotlib and Seaborn
- 5 - Statistics and Statistical models
- 6 - Working with Different Types of Datasets
- 7 - Structured Query Language (SQL)
- 8 - Data Storytelling with Tableau or PowerBI
- 9 - Business Acumen and working with Business Problems
- 10 - Machine Learning Basics & Predictive Analytics
- 11 - Time Series Analysis & Forecasting
- 12 - Business Case Studies & Analysis

We will need 8 Weeks to complete each topic and be ready for the job interview.

Week 1

Chapter 1 - Python Programming & Logic Building

[1 | Python Programming](#)

1 | While Loops, Lists, Strings

2 | For Loop, Dictionary, Tuples, Set

3 | Functions

4 | Modules, Packages, and PIP

5 | Virtual Environment, Flask, and Python Web Scrapping

Week 2

Chapter 2 - Data Analysis with Python

[2 | Understanding NumPy](#)

NumPy basics

Working with Matrix

Linear Algebra operations

Descriptive Statistics

Normal Distribution Operations

Mean, Variance, and Standard Deviation

Reshaping arrays

3 | Exploratory Data Analysis (EDA) with Pandas

Pandas

Data Analysis basics

Dataframe operations

Working with 2-dimensional data

Data Cleaning

Data Grouping

Working with Datasets

4 | Data Visualization with Matplotlib and Seaborn - Projects

Matplotlib

Plot Basics

Format Strings

Label and Legends

Bar Chart

Pie Chart

Week 3

Chapter 3 - Statistical Analysis and Data Analytics Projects

[5 | Statistics and Statistical Models](#)

Descriptive Statistics

- Measure of Frequency and Central Tendency
- Measure of Dispersion
- Probability Distribution
- Gaussian Normal Distribution
- Skewness and Kurtosis
- Regression Analysis
- Continuous and Discrete Functions
- Goodness of Fit
- ANOVA

Inferential Statistics

- t-Test
- z-Test
- Hypothesis Testing
- Type I and Type II errors
- t-Test and its types
- One way ANOVA
- Two way ANOVA
- Chi-Square Test
- Implementation of continuous and categorical data

[6 | Working with Different Types of Datasets - Projects](#)

Week 4

Chapter 4 - Database Management with SQL

[7 | SQL - Structured Query Language - Project](#)

Roadmap

- 1 | Fundamentals to SQL and Installation
- 2 | Creating Tables - modifiers, altering table
- 3 | Retrieving Data - SELECT
- 4 | Aggregating Data using Functions
- 5 | Subqueries - retrieving data with conditions
- 6 | JOINS

Project

Week 5

Chapter 5 - Data Storytelling

[8 | Data Storytelling with Tableau or PowerBI - Projects](#)

Week 6

Chapter 6 - Business Problems

[9 | Business Acumen - Working with Business Problems](#)

Week 7

Chapter 7 - Predictive Analytics

[10 | Machine Learning - Basics & Predictive Analytics](#)

Machine Learning

Linear Regression

Logistic Regression

Projects for Building ML Model

Week 8

Chapter 8 - Forecasting & Case Studies

[11 | Time Series Analysis & Forecasting](#)

[12 | Business Case Studies & Analysis](#)

What to do Next?

Resources & Projects

[Data Analyst Interview](#)

[Projects](#)

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Are you interested in these topics:

Python 🐍 Machine Learning 🤖 Data Science 🧪

Data Engineering 👨‍💻 Computer Vision 🖥️

NLP 🤝 Business Problems 🚀

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