Non-Tech

Data Analytics

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 Non-Tech Data Analyst profile:

https://god-level-python.notion.site/Data-Analytics-Roadmap-Building-Profile-Portfolio-July-Cohort-ec381aac7a9944e2a529e281c0d2aaf8?pvs=4

- 1 | Python Programming
- 2 | Understanding NumPy
- 3 | Exploratory Data Analysis (EDA) with Pandas
- 4 | Data Visualization with Matplotlib and Seaborn
- 5 | Working with Different Types of Datasets - Projects
- 6 | Statistics and Statistical Models
- 7 | Machine Learning - Basics & Predictive Analytics
- 8 | Time Series Analysis & Forecasting
- 9 | SQL - Structured Query Language
- 10 | Excel for Analyst
- 11 | Data Storytelling with Tableau
- 12 | Business Case Studies & Analysis
- 13 | Data Analyst Interview
- 14 | Resume Resources

You have to choose the domain that you are currently working in and integrate the data analytics knowledge into it so that you will be a domain expert, as well as your previous years of experience, will be in use.

Week 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 - Data Analysis with Python & Pandas

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

Matplotlib

Plot Basics

Format Strings

Label and Legends

Bar Chart

Pie Chart

Week 3 - Statistical Analysis

6 | Working with Different Types of Datasets - 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

Week 4 - Predictive Analytics and Machine Learning

7 | Machine Learning - Basics & Predictive Analytics

Machine Learning

Linear Regression

Logistic Regression

Projects for Building ML Model

8 | Time Series Analysis & Forecasting

Time series data visualization

Time series decomposition

Stationarity

Autocorrelation

ARIMA models

Exponential smoothing models

Prophet

LSTM models

Evaluation metrics

Week 5 - Database Management with SQL and Excel

9 | SQL - Structured Query Language

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

10 | Excel for Analyst

Week 6 - Data Storytelling, Visualization and Business Case Studies

11 | Data Storytelling with Tableau

12 | Business Case Studies & Analysis

Week 7 - Interview Preparation, Resume Building and Portfolio

13 | Data Analyst Interview

14 | Resume Resources

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