

# Data Analyst

## Roadmap

**#66DaysofData**

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**M.Tech | Data Science**

Credit: <https://github.com/mrankitgupta/Data-Analyst-Roadmap>

I am sharing my journey of #66DaysofData into Data Analytics by participating in Ken Jee's #66daysofdata challenge

Data Analytics is the process of exploring and analyzing large datasets to find hidden patterns, unseen trends, discover correlations, and derive valuable insights to make business predictions.

It helps in Improved Decision Making, Better Customer Service, Efficient Operations, Effective Marketing and Improves the Speed and Efficiency of the business.

Businesses use many modern tools and technologies to perform Data Analytics.

## Technologies used

- [Advance Excel](#)
- [Data Structures](#)
- [Database Management System \(DBMS\)](#)
- [SQL Server](#) | [MySQL](#)
- [MongoDB](#)
- [Tableau](#) | [Power BI](#)
- [Python](#)
- [Python Libraries](#) : [Pandas](#) | [NumPy](#) | [Matplotlib](#) | [Seaborn](#)
- [Statistics](#)

## My Certifications

- [Data Analysis with Python](#) - by IBM
- [Data Visualization with Python](#) - by IBM
- [Pandas](#) - by Kaggle
- [Numpy & Matplotlib](#) - by Great Learning
- [Databases and SQL for Data Science with Python](#) - by IBM
- [Statistics for Data Science with Python](#) - by IBM
- [Data Visualization with Tableau](#) - by Simplilearn
- [Data Visualization with Advanced Excel](#) - by PWC

## What are my featured projects ? 🧑🏫 📡

[Spotify Data Analysis using Python](#) 📊

[Sales Insights - Data Analysis using Tableau & SQL](#) 📊

[Statistics for Data Science using Python](#) 📊


[Kaggle - Pandas Solved Exercises](#) 📊


[Complete Python Roadmap](#) 📄


[Python Libraries for Data Science](#) 📁



[Library Management System using Python on Django](#) 🧑🏫

## Timeline


Day 	Lessons/Tasks Done 🕒	Reference Links 🔗
Day 1	Learnt Basics of Advanced Excel (Functions, Formulas, Charts, Conditional Formatting)	<a href="#">Data Visualization with Advanced Excel - by PWC</a>
Day 2	Practiced taking sample data on Advanced Excel (Lookups, What-If Tool, Pivot Table, VBS & Macros, Power Pivot & Dashboards)	<a href="#">YouTube</a> ✅

Day 3	Started with Data Structures (Arrays, Stack, Queue, Linked List & their Computational Complexity)	<a href="#">Geeks for Geeks</a>
Day 4	Continued with Data Structures (Doubly Linked List, Dictionaries, Trees)	<a href="#">YouTube 1</a>
Day 5	Completed with Data Structures (Tries, Heap, Sorting, Graph)	<a href="#">YouTube 2</a> 
Day 6	Started with DBMS (Concepts, Characteristics & Architectures, File system vs DBMS Database storage structures, Data models, Data Schema)	<a href="#">JavaTpoint - DBMS</a>
Day 7	Continued with DBMS (Entity Relationship Model, Design, Relational Model, Relational Algebra, Functional Dependencies, keys)	<a href="#">YouTube</a>
Day 8	Continued with DBMS (Normalisation, types, purpose, keys, Schema, Transactional mngt. and Concurrency Control, Acid property, Deadlock)	<a href="#">Geeks for Geeks</a>

Day 9	Continued with DBMS (Indexing, B and B+ trees, File Organization, Joins, Hashing)	<a href="#">JavaTpoint - Data Mining</a>
Day 10	Continued with DBMS (Backup & recovery techniques, Database security & Authorization, Query processing & evaluation)	<a href="#">JavaTpoint - Data Warehouse</a>
Day 11	Completed with DBMS (Data Warehousing, Schemas - (Star schema, Snowflake schema), OLAP, OLTP, Data Mining)	
Day 12	Started with SQL (RDBMS, SQL vs NoSQL, Hbase vs Rdbms, Basics, Constraints, Syntax- DDL, DML)	<a href="#">JavaTpoint</a>
Day 13	Continued with SQL (Syntax - DQL, DCL & TCL, Operators, Database, Table, Select)	<a href="#">YouTube</a>
Day 14	Continued with SQL (Clauses, Order by, Insert, Update, Delete, Join, Keys, Queries, Functions)	<a href="#">TutorialsPoint</a>

Day 15	Continued with SQL (SQL-Injection, Data Integrity, Constraints, Flow control, T-SQL)	<a href="#">Databases and SQL for Data Science with Python - by IBM</a>
Day 16	Completed with SQL (Backup & Restore, Pivot table, Alias Syntax, Wildcards, Truncate table)	<a href="#">Project: Sales Insights - Data Analysis using Tableau &amp; SQL</a> 
Day 17	Started with NoSQL	<a href="#">JavaTpoint</a>
Day 18	Continued with MongoDB	<a href="#">YouTube</a>
Day 19	Continued with MongoDB	[Coursera]
Day 20	Completed with MongoDB	[Project] 
Day 21	Started with Tableau & Data Visualization (Data Cleaning, Blending, Data Joining, Data Blending, Data Sorting, Data Aggregation)	<a href="#">JavaTpoint</a>

Day 22	Continued with Tableau & Data Visualization (Tableau Calculations - Operators, Functions, Numeric Calculations, String Calculations, Date Calculations, Table Calculations, LOD Expressions)	<a href="#">YouTube</a>
Day 23	Continued with Tableau & Data Visualization (Filter Data, Filter Operations, Extract Filters, Quick Filters, Context Filters, Condition Filters, Data Source Filters, Top Filters, Sort Data, Build Groups, Build Hierarchy, Build Sets)	<a href="#">Data Visualization with Tableau - by Simplilearn</a>
Day 24	Continued with Tableau & Data Visualization (Charts & Graphs - Bar Chart, Line Chart, Pie Chart, Bubble Chart, Bump Chart, Gantt Chart, Crosstab Chart, Motion Chart, Waterfall Chart, Bullet Chart, Area Chart, Pareto Chart, Dual Axis Chart, Box Plot, Heat Map, Tree Map, Scatter Plot, Histogram)	<a href="#">My Tableau Public Project</a>

Day 25	Completed with Tableau & Data Visualization (Dashboard, Formatting, Forecasting, Trend Lines, Advanced Mapping - Point to point maps, Calculation distances between two points on a map, Dual axis map)	<a href="#">Project: Sales Insights - Data Analysis using Tableau &amp; SQL</a> 
Day 26	Started with Python (Python basics - Features Applications, Python 2 vs Python 3, Libraries uses)	<a href="#">Python Lessons for Practice</a>
Day 27	Continued with Python (Interpreter Prompt, Script mode programming, IDEs, Features of an IDE, Compiler vs Interpreter)	<a href="#">JavaTpoint</a>
Day 28	Continued with Python (Pycharm - Features, Important tools, Useful Plugins)	<a href="#">Geeks for Geeks</a>
Day 29	Continued with Python (Modules, Comments, Pip, Docstrings)	<a href="#">YouTube 1</a>
Day 30	Continued with Python (Indentation, Packages in Python, Modules vs Packages)	<a href="#">Youtube 2</a>



Day 31	Continued with Python (Variables, Declaring & Assigning Values, Object references, Object identity, Variable names, Multiple Assignment, Variable Types)	<a href="#">Data Analysis with Python - by IBM</a>
Day 32	Continued with Python (Fundamentals of Python - Tokens, Keywords, Literals, Operators, Identifiers & Comments)	<a href="#">Data Visualization with Python</a>
Day 33	Continued with Python (Data Types - Numbers, Sequence Type, Dictionary, Set, Type Conversion)	<a href="#">Databases and SQL for Data Science with Python - by IBM</a>
Day 34	Continued with Python (Collection Module - String, List & Tuples)	<a href="#">Statistics for Data Science with Python - by IBM</a>
Day 35	Continued with Python (Collection Module - Sets, Dictionary & Different containers provided by collection module)	<a href="#">HackerRank - Practice</a>
Day 36	Continued with Python (Control Flows - Indentation, If-Else & ELIF Statements)	<a href="#">Code With Harry - Python Notes &amp; Tutorial</a>

Day  
37 Continued with Python  
(Control Flows - For,  
While & Nested Loops,  
Control statements &  
Patterns)

[Python Cheatsheet - Code With Harry](#)

Day  
38 Continued with Python  
(Functions - Types of  
Functions, Arguments &  
it's Types, Scope of  
Variables)

[Basic Python Projects - YouTube](#)

Day  
39 Continued with Python  
(Functions - Built-in  
Functions)

Day  
40 Continued with Python  
(Functions - Lambda  
Functions, Decorators,  
Generators)

Day  
41 Continued with Python  
(Arrays)

Day  
42 Continued with Python  
(Hash Tables / Hash Map)

Day  
43 Continued with Python  
(OOps Concept - Class &  
Objects, Constructors,  
Destructors)


Day  
44 Continued with Python  
(OOps Concept -  
Inheritance)

Day 45	Continued with Python (OOps Concept - Polymorphism, Encapsulation)	<a href="#">Project 1: Spotify Data Analysis using Python</a>
Day 46	Continued with Python (OOps Concept - Data Abstraction, Python Super Function)	<a href="#">Project 2: Statistics for Data Science using Python</a>
Day 47	Completed with Python (Exception Handling, File Handling & Unit Testing in Python)	✓
Day 48	Started with Python Libraries - NumPy (Basics, NumPy v/s MATLAB, NumPy v/s List, NdArray, Datatypes, Array Attributes)	<a href="#">Python Libraries for Data Science - Exercises</a>
Day 49	Continued with Python Libraries - NumPy (Indexing & Slicing, Array Creation, Broadcasting, Operations, Functions, Mathematics, Matrix, NumPy-Matplotlib)	<a href="#">NumPy Tutorial - by Great Learning &amp; JavaTpoint, YouTube, TutorialsPoint</a> ✓
Day 50	Continued with Python Libraries - Pandas (Basics, Data Structures - Series, DataFrame, Panel)	<a href="#">Pandas Course - by Kaggle</a>

Day 51	Continued with Python Libraries - Pandas (Operations - Slicing, Merging, Joining, Concatenation)	<a href="#">Kaggle Notebooks on Pandas &amp; GitHub Repo on Pandas</a>
Day 52	Continued with Python Libraries - Pandas (Changing Index & Column Header, Pandas-Matplotlib, Data Munging)	<a href="#">JavaTpoint, YouTube, TutorialsPoint</a> 
Day 53	Continued with Python Libraries - Matplotlib (Basics, Data Visualization, Architecture, Concepts)	<a href="#">Matplotlib Course - by Great Learning</a>
Day 54	Completed with Python Libraries - Matplotlib (Pyplot & Subplot, Functions, 7 Types of plots, Multiple plots)	<a href="#">JavaTpoint, YouTube, TutorialsPoint</a> 
Day 55	Started with Statistics (Intro, Basics of Descriptive statistics - Mean, Median, Mode, Variance, & Standard deviation)	<a href="#">Statistics for Data Science with Python - by IBM</a>
Day 56	Continued with Statistics (Data Visualization, Probability & Probability distributions, Hypothesis testing)	<a href="#">TutorialsPoint, GitHub Project</a>

Day 57	Completed with Statistics (Regression Analysis, <a href="#">Project: Boston Housing Data Analysis using Python</a> )	<a href="#">Real Estate Project</a> 
Day 58	Daily Practice while learning (SQL, Python, Data Structures, Databases)	<a href="#">HackerRank</a> 
Day 59	Tableau Project : Sales Insights - Data Analysis using Tableau & SQL	<a href="#">Project</a>
Day 60	Tableau Project : Sales Insights - Data Analysis using Tableau & SQL	<a href="#">Tableau Public Dashboard</a>
Day 61	Tableau Project : Sales Insights - Data Analysis using Tableau & SQL	<a href="#">YouTube</a> 
Day 62	Python Project : Spotify Data Analysis using Python	<a href="#">Project</a>
Day 63	Python Project : Spotify Data Analysis using Python	<a href="#">Kaggle Notebook</a>
Day 64	Python Project : Spotify Data Analysis using Python	<a href="#">YouTube</a> 

Day 65      Project : Boston Housing Data Analysis using Python      [Project](#)

Day 66      Challenge accomplished      

Useful Repositories to learn Data Science: [Complete Python Roadmap](#)  Python [Libraries for Data Science](#)  & [Kaggle - Pandas Solved Exercises](#) 

So happy to have followed the journey through for the past 66 days.

It has really been a great learning experience and I have learnt a lot.

More importantly, I have developed the habit of learning Data Science every day no matter how small.

## Useful sites to learn Coding

### YouTube Channels:

[freeCodeCamp.org](#)

[Code With Harry, Programming With Harry](#)

[Code Basics](#)

[Edu rek a](#)

[Gate Sma sher s](#)

[Jen ny's Lecture s](#)

[Simpl ilearn](#)

[Intelli paat](#)

### Other Learning Platforms:

[JavaT point](#)

[Tutorial sPoint](#)

[Ge ek s For Ge](#)

[Co de Wi th Ha rry](#)

[Git Hu b](#)

[Ka ggl e](#)

[DataC amp](#)

[W3Sc hools](#)

[Gur u99](#)

[D e v](#)

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## For Certifications:

Cou rser a	Ka gg le	Simp lilear n	Gre at Lear ning s	Fo ra ge	Ed ure ka	Hack erRan k	Ud em y	Cod ech ef	Up gra d	Ud aci ty
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## For Coding Practice:

Hacker Rank	Leet code	Ka ggl e	Code chef	Un sto p	Hacker Earth	Codef orces	Intervi ewbit	Go ogl e Dev
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Credit: <https://github.com/mrankitgupta/Data-Analyst-Roadmap>

## **Data Science ML Full Stack Roadmap**

<https://github.com/hemansnation/Data-Science-ML-Full-Stack-2022>

## **Join Telegram for Data Science ML AI Resources:**

<https://t.me/+sREuRiFssMo4YWJl>

## **Connect with me on these platforms:**

LinkedIn: <https://www.linkedin.com/in/hemansnation/>

Twitter: <https://twitter.com/hemansnation>

GitHub: <https://github.com/hemansnation>

Instagram: <https://www.instagram.com/masterdexter.ai/>

## **Are you a professional?**

DM for One-on-One sessions for Python, Data Science, Machine Learning, and Data Engineering.

Here: <https://bit.ly/3U6zQvQ>