

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) | Data Visualization with Advanced Excel - by PWC |
| Day 2 | Practiced taking sample data on Advanced Excel (Lookups, What-If Tool, Pivot Table, VBS & Macros, Power Pivot & Dashboards) | YouTube ✅ |

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

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| Day 9 | Continued with DBMS (Indexing, B and B+ trees, File Organization, Joins, Hashing) | JavaTpoint - Data Mining |
| Day 10 | Continued with DBMS (Backup & recovery techniques, Database security & Authorization, Query processing & evaluation) | JavaTpoint - Data Warehouse |
| 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) | JavaTpoint |
| Day 13 | Continued with SQL (Syntax - DQL, DCL & TCL, Operators, Database, Table, Select) | YouTube |
| Day 14 | Continued with SQL (Clauses, Order by, Insert, Update, Delete, Join, Keys, Queries, Functions) | TutorialsPoint |

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| Day 15 | Continued with SQL (SQL-Injection, Data Integrity, Constraints, Flow control, T-SQL) | Databases and SQL for Data Science with Python - by IBM |
| Day 16 | Completed with SQL (Backup & Restore, Pivot table, Alias Syntax, Wildcards, Truncate table) | Project: Sales Insights - Data Analysis using Tableau & SQL  |
| Day 17 | Started with NoSQL | JavaTpoint |
| Day 18 | Continued with MongoDB | YouTube |
| 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) | JavaTpoint |

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| Day 22 | Continued with Tableau & Data Visualization (Tableau Calculations - Operators, Functions, Numeric Calculations, String Calculations, Date Calculations, Table Calculations, LOD Expressions) | YouTube |
| 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) | Data Visualization with Tableau - by Simplilearn |
| 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) | My Tableau Public Project |

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| 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) | Project: Sales Insights - Data Analysis using Tableau & SQL  |
| Day 26 | Started with Python (Python basics - Features Applications, Python 2 vs Python 3, Libraries uses) | Python Lessons for Practice |
| Day 27 | Continued with Python (Interpreter Prompt, Script mode programming, IDEs, Features of an IDE, Compiler vs Interpreter) | JavaTpoint |
| Day 28 | Continued with Python (Pycharm - Features, Important tools, Useful Plugins) | Geeks for Geeks |
| Day 29 | Continued with Python (Modules, Comments, Pip, Docstrings) | YouTube 1 |
| Day 30 | Continued with Python (Indentation, Packages in Python, Modules vs Packages) | Youtube 2 |

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

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)

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| Day 45 | Continued with Python (OOps Concept - Polymorphism, Encapsulation) | Project 1: Spotify Data Analysis using Python |
| Day 46 | Continued with Python (OOps Concept - Data Abstraction, Python Super Function) | Project 2: Statistics for Data Science using Python |
| 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) | Python Libraries for Data Science - Exercises |
| Day 49 | Continued with Python Libraries - NumPy (Indexing & Slicing, Array Creation, Broadcasting, Operations, Functions, Mathematics, Matrix, NumPy-Matplotlib) | NumPy Tutorial - by Great Learning & JavaTpoint, YouTube, TutorialsPoint ✓ |
| Day 50 | Continued with Python Libraries - Pandas (Basics, Data Structures - Series, DataFrame, Panel) | Pandas Course - by Kaggle |

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

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

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 Smasher s](#)

[Jen ny's Lect ure 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](#)

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For Certifications:

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| 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:

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| 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>