Data Analyst

Roadmap

#66DaysofData

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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 ✅

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, Charachteristics & 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

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

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

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

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 - Featues, 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

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)	

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

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

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**	**Edureka**	**Gate Smashers**	**Jenny's Lectures**	**Simplilearn**	**Intellipaat**

Other Learning Platforms:

JavaTpoint	**TutorialsPoint**	**GeeksForGeeks**	**CodeWithHarry**	**GitHub**	**Kaggle**	**DataCamp**	**W3Schools**	**Guru99**	**Dev**

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For Certifications:

Coursera | Kaggle | Simplilearn | Great Learnings | Forage | Edureka | HackerRank | Udemy | Codechef | Upgrad | Udacity

For Coding Practice:

HackerRank | Leetcode | Kaggle | Codechef | Unstop | HackerEarth | Codeforces | Interviewbit | Google Dev

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/

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