

FULL STACK ACADEMY

www.fullstackacademy.in

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Duration: 3 Months



DATA ANALYSIS

1.Introduction to Data/Statistics

2.Python Programming

3.Introduction Machine Learning

4.SQL (Structured Query Language)

5.Advanced MS Excel

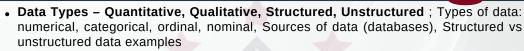
6.Power Bi

7. Google Looker Studio

8.Tableau

9.Final Project

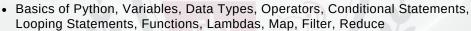
MODULE 1: INTRODUCTION TO DATA / STATISTICS



• Descriptive Statistics - Mean, Median, Mode, Variance: Central tendency and dispersion Standard deviation, range, percentiles, quartiles, Outliers and skewness, Practical calculation using Python (NumPy/Pandas)

 Inferential Statistics Correlation. **Probability:** Correlation VS. causation, Covariance, Pearson and Spearman correlation, Probability basics, types (independent, conditional)

MODULE 2: PYTHON PROGRAMMING



OOPs, Classes and Objects, Modules, Libraries, Exception Handling

Libraries: NumPy, Pandas, Matplotlib, Seaborn

MODULE 3: INTRODUCTION TO MACHINE LEARNING



- Foundations of Machine Learning, Types of Machine Learning: What is Machine Learning and its applications, Supervised, unsupervised.
- Common ML Algorithms: Linear regression, Simple hands-on demo with Scikit-learn

MODULE 4: SQL



- Introduction to Databases and SQL, Retrieving Data with SELECT Queries
- Filtering and Sorting Data, Aggregate Functions and Grouping Data
- Joins and Relationships between Tables
- Data Manipulation (INSERT, UPDATE, DELETE)
- Analytical Querying and Case Studies, Integration, Optimization & Final Project



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LEARN TOP 5 A.I TOOLS



CHATGPT









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- and lookup functions Data Analysis using Lookup Formulas, Pivot Tables, and Visualization Techniques VLOOKUP, HLOOKUP, INDEX-MATCH, Creating and customizing pivot tables, Conditional formatting and data validation
- Advanced Chart Techniques and Dashboarding Combination charts, dynamic charts, Slicers and timeline filters, Dashboard design principles

MODULE 6: POWER BI

- Connecting to Data Sources: Introduction. Connecting Excel. CSV.
- Power Query: Data Cleaning and Transformation: Removing duplicates, splitting columns, merging queries, Data profiling and applied steps
- Data Modelling and DAX : Relationships, primary and foreign keys, DAX basics: CALCULATE, SUMX, FILTER, RELATED, Creating measures and calculated columns
- Power View and Data Visualizations: Building visuals (cards, charts, tables), Drillthrough, filters, and slicers, Designing interactive dashboards

MODULE 7: GOOGLE LOOKER STUDIO

- Connecting to Data Sources, Creating Dashboards and Reports
- · Exploring Data: Views, Fields, and Filters
- Advanced Features: Derived Tables, Merged Queries, and LookML

MODULE 8: TABLEAU



Introduction to Tableau, Measures and Calculated Fields, Charts and Analysis using Tableau.

MODUEL 9: FINAL PROJECT



- Select one tool (Python, Power BI, Tableau, or Looker Studio)
- Define problem statement and dataset
- Perform end-to-end analysis (data cleaning, visualization, insights)
- Present findings and recommendations
- Evaluation on creativity, clarity, and data storytelling