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Week 1

Session 1: Introduction to Excel for Data Analysis

- Overview of Excel interface
- Basics of navigating and working with sheets
- Introduction to cells, rows, columns, and ranges
- Understanding basic functions (SUM, AVERAGE, COUNT)
- Working with mathematical and statistical functions
- Introduction to text functions for data manipulation

Session 2: Advanced Formulas and Functions

- Working with logical functions (IF, AND, OR)
- Exploring lookup functions (VLOOKUP, HLOOKUP, INDEX, MATCH)
- Introduction to array formulas
- Identifying and handling missing data
- Removing duplicates and dealing with errors
- Text-to-columns and data-splitting techniques
- Formatting data for analysis
- Creating basic charts and graphs
- Tips for effective data presentation
- Introduction to PivotTables for dynamic data analysis
- Creating PivotCharts for visual insights
- Customizing and formatting PivotTables and PivotCharts
- Time-saving shortcuts and productivity hacks
- Excel with AI

Week 2

Session 3: Introduction to SQL and Database Fundamentals

- Overview of SQL and its applications
- Introduction to relational databases
- Basic SQL syntax and structure
- Creating and modifying tables with CREATE and ALTER
- Understanding data types and constraints

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Session 10: Working on live project

- Working on industry orient data
- Problem solving using SQL on industrial data

Week 6

Session 11: Introduction to Python and Jupyter Notebooks

- Overview of Python programming language
- Introduction to Jupyter Notebooks for data analysis
- Variables, data types, and basic operations
- Lists, tuples, and dictionaries
- Inbuilt functions

Session 12: Data Manipulation with Python

- Conditional statements and loops
- User defined functions
- Functions such as map, filter , lambda

Week 7

Session 13: Data Manipulation with Pandas

- Overview of Pandas library
- Reading and writing data along with basic operation with Pandas

Session 14: Data Cleaning and Preprocessing with Pandas

- Handling missing data
- Removing duplicates and dealing with outliers
- Cleaning and adjustments in data

Week 8

Session 15: Exploratory Data Analysis (EDA) with Pandas

- Descriptive statistics and data summarization
- Grouping and aggregating data
- SQL like operation in data

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Session 22: Visualizations and Interactivity

- Creating common visualizations (bar charts, line charts, etc.)
- Customizing visualizations for better insights
- Adding interactivity to reports and dashboards
- Implementing drill-through actions for detailed analysis
- The Art of Storytelling with Data
- Principles of Effective Data Storytelling
- Importance of narrative in data presentations
- Building a cohesive narrative in Power BI
- Using bookmarks and storytelling features

Week 12

Session 23: Real-Time Dashboards

- Setting up real-time data streaming in Power BI
- Creating dashboards for live data monitoring

Session 24: Advanced Features and Custom Visuals

- Exploring custom visuals and visuals from the marketplace
- Leveraging advanced features like forecasting and clustering
- Case Studies and Discussion
- Reviewing case studies of effective Power BI usage
- Q&A and discussions on best practices in storytelling with data