DATA ANALYTICS WITH EXCEL, SQL, AND POWER BI

AGENDA

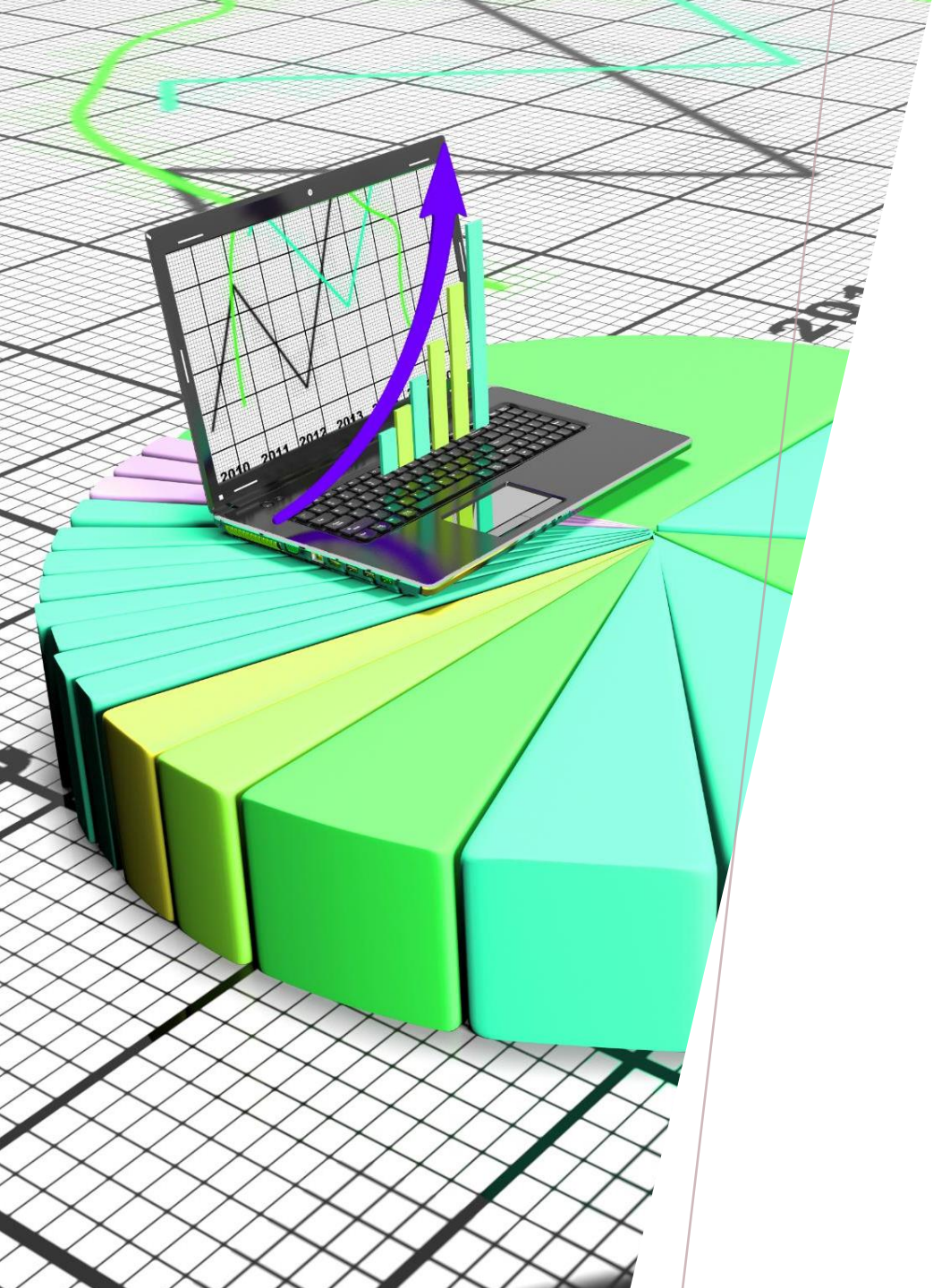
- Introduction
- Program Overview
- Month 1: Foundations of Data Analytics with Excel
- Month 2: Introduction to SQL for Data Analysis
- Month 3: Data Visualization and Reporting with Power BI
- Additional Course Components
- Detailed Course Breakdown

COURSE DETAILS

- Course Duration
  - 3 months long
- Class Schedule
  - Weekend classes
  - 3 hours each weekend
- Eligibility Criteria
  - Beginners to intermediate-level professionals
- Mode of Instruction
  - Live online sessions
  - Hands-on labs

COURSE OVERVIEW

- Comprehensive 3-Month Training
  - In-depth coverage of Excel, SQL, and Power BI
  - Real-world applications to enhance learning
- Expert Tutors
  - Industry professionals with extensive experience



PROGRAM GOALS

- Essential Skills Development
  - Data analytics and visualization with Excel, SQL, and Power BI
  - Designed for beginners and those enhancing their skills
- Core Tools Mastery
  - Efficient data management
  - Performing complex queries
  - Creating interactive dashboards
- Industry Professional Guidance
  - Practical knowledge applicable to various industries

PROGRAM HIGHLIGHTS

- Real-World Projects
  - Hands-on labs simulating real industry scenarios
- Certification Guidance
  - Resources and support for certification in data analytics tools
- Community Access
  - Connect with peers and industry professionals in the data analytics field
- Comprehensive Curriculum
  - Covers essential to advanced Excel, SQL, and Power BI techniques

EXCEL ESSENTIALS

- Excel Essentials (Week 1-2)
  - Basic Excel functions, formulas, and data organization
  - Data cleaning and preparation
  - Data validation and conditional formatting
- Hands-On Labs
  - Organizing and cleaning datasets
  - Using basic functions and formulas for data analysis
- Explanation
  - Understanding the fundamentals of Excel
  - Focus on efficient data handling and preparation for analysis

DATA ANALYSIS AND VISUALIZATION IN EXCEL

- Key Topics
  - Pivot Tables and Pivot Charts
  - Advanced Excel functions (LOOKUP, INDEX, MATCH)
  - Introduction to Excel's Data Analysis ToolPak
- Hands-On Labs
  - Creating dynamic reports with Pivot Tables
  - Using formulas for complex calculations
- Explanation
  - Analyze large datasets
  - Create visualizations in Excel for insights

SQL BASICS

- Week 5-6: SQL Basics
  - Database concepts and SQL introduction
  - Basic SQL queries: SELECT, WHERE, ORDER BY
  - Filtering and sorting data in SQL
- Hands-On Labs
  - Querying sample databases to retrieve and filter data
- Explanation
  - Students will learn to extract relevant data from databases using basic SQL queries
  - Setting a foundation for more complex data manipulation

INTERMEDIATE SQL AND DATA TRANSFORMATION

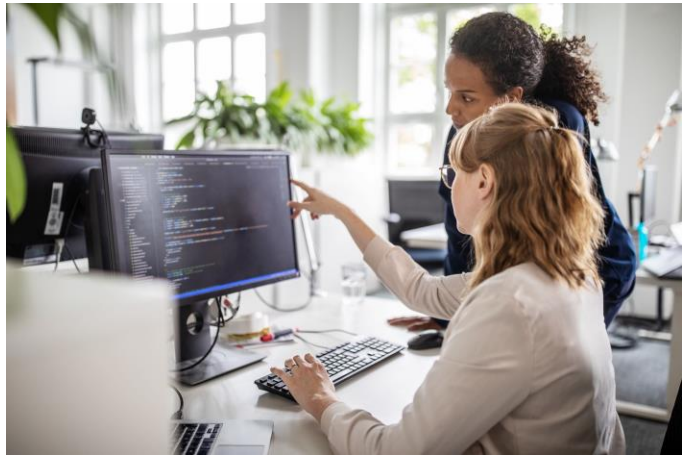
- Key Topics
  - JOINS, UNION, and combining datasets
  - Data aggregation: GROUP BY, HAVING
  - Creating views and subqueries
- Hands-On Labs
  - Performing complex queries and data transformations
  - Building views to streamline analysis
- Explanation
  - Learners will gain proficiency in merging and aggregating data
  - Essential skills for comprehensive data analysis

POWER BI FUNDAMENTALS

- Week 9-10: Power BI Fundamentals
  - Introduction to Power BI: Interface and key features
  - Data import and transformation in Power BI
  - Creating basic visualizations: Charts, Tables, Maps
- Hands-On Labs
  - Importing and transforming data in Power BI
  - Building basic interactive dashboards
- Explanation
  - Students will become familiar with Power BI's tools
  - Learn to create visually engaging and informative dashboards

ADVANCED REPORTING AND FINAL PROJECT

- Key Topics
  - Advanced DAX for calculations
  - Data modeling and relationships in Power BI
  - Final project: Designing an end-to-end dashboard
- Hands-On Labs
  - Using DAX for complex calculations
  - Creating and presenting a comprehensive Power BI report
- Explanation
  - Build advanced data models
  - Perform detailed analyses
  - Capstone project: Create a complete Power BI solution



WEEKLY Q&A AND OFFICE HOURS

- Weekly Q&A and Office Hours
  - Interact with expert tutors for personalized guidance
- Assignments
  - Weekly tasks to reinforce learning in each module
- Guest Lectures
  - Insights from industry data professionals
- Certification Guidance
  - Resources and guidance on certifications in Excel, SQL, and Power BI
- Networking Opportunities
  - Access to a community of data analysts and industry experts

ENROLLMENT INFORMATION

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WEEKEND 1: EXCEL FUNDAMENTALS AND DATA ORGANIZATION

- Weekend 1
  - (1.5 hours): Excel Fundamentals
    - Introduction to Excel interface and essential navigation
    - Understanding basic functions and formulas (SUM, AVERAGE, COUNT)
    - Overview of data cleaning and preparation techniques
    - Hands-On Labs
      - Applying basic functions on sample datasets
      - Cleaning and organizing datasets for analysis
  - (1.5 hours): Data Organization in Excel
    - Data validation, conditional formatting, and sorting/filtering
    - Introduction to tables and basic data manipulation
    - Hands-On Labs

WEEKEND 2: ADVANCED FUNCTIONS AND DATA VISUALIZATION IN EXCEL

- Advanced Functions and Formulas
  - Mastering LOOKUP, VLOOKUP, HLOOKUP, INDEX, and MATCH
  - Using IF statements and logical functions for data analysis
  - Hands-On Labs
    - Applying VLOOKUP and INDEX/MATCH in complex scenarios
    - Creating conditional logic with IF statements
- Data Visualization in Excel
  - Introduction to Pivot Tables and Pivot Charts
  - Creating basic charts: bar, line, and pie charts
  - Hands-On Labs
    - Building Pivot Tables to summarize data
    - Creating visual insights with Excel charts

WEEKEND 3: DATA ANALYSIS TOOLPAK AND DASHBOARDS IN EXCEL

- Data Analysis ToolPak
  - Installing and using the ToolPak
  - Running basic statistical analysis: mean, standard deviation, and correlation
- Hands-On Labs for ToolPak
  - Performing basic data analysis
  - Interpreting statistical outputs in business contexts
- Dashboards in Excel
  - Combining charts, Pivot Tables, and conditional formatting
  - Designing interactive elements with slicers and timelines
- Hands-On Labs for Dashboards
  - Building a simple dashboard integrating key data insights

WEEKEND 4: SQL ESSENTIALS AND FILTERING/SORTING

- SQL Essentials (1.5 hours)
  - Introduction to SQL and relational databases
  - Basic SQL syntax: SELECT, FROM, WHERE
  - Hands-On Labs
    - Writing simple queries to retrieve data
    - Filtering data with WHERE clause
- SQL Filtering and Sorting (1.5 hours)
  - Sorting data with ORDER BY
  - Using LIMIT to control result sets
  - Hands-On Labs
    - Sorting and filtering real datasets
    - Applying sorting techniques for analysis

WEEKEND 5: WORKING WITH MULTIPLE TABLES AND AGGREGATION

- Working with Multiple Tables
  - Introduction to JOINS: INNER, LEFT, RIGHT, FULL
  - Combining data from multiple tables for comprehensive insights
  - Hands-On Labs
    - Writing JOIN queries to merge datasets
    - Solving business scenarios with multi-table queries
- Aggregation and Grouping
  - Using COUNT, SUM, AVG, MIN, MAX functions
  - GROUP BY and HAVING for data aggregation
  - Hands-On Labs
    - Aggregating data to answer specific questions
    - Using GROUP BY and HAVING in reports

WEEKEND 6: SUBQUERIES, VIEWS, AND DATA TRANSFORMATION

- Subqueries and Views
  - Creating subqueries for complex analysis
  - Defining and using Views for organized queries
  - Hands-On Labs
    - Practicing subqueries and creating reusable views
    - Using Views for simplified data retrieval
- Data Transformation Techniques
  - Using CASE statements for conditional logic
  - Introduction to data transformation with SQL
  - Hands-On Labs
    - Applying CASE statements for data categorization
    - Transforming data to meet specific requirements

WEEKEND 7: POWER BI FUNDAMENTALS AND BASIC VISUALIZATIONS

- Weekend 7 Overview
  - Power BI Fundamentals (1.5 hours)
  - Building Basic Visualizations (1.5 hours)
- Power BI Fundamentals
  - Overview of Power BI desktop and its interface
  - Data import and transformation in Power BI
  - Hands-On Labs
    - Importing data from Excel and SQL databases
- Building Basic Visualizations
  - Creating common visualizations: bar charts, line charts, tables
  - Using slicers and filters to refine data views
  - Hands-On Labs

WEEKEND 8: DATA MODELING, RELATIONSHIPS, AND DAX

- Data Modeling and Relationships
  - Creating relationships between data tables
  - Introduction to data modeling principles
  - Hands-On Labs
    - Building relationships between imported datasets
    - Using related data for cross-table insights
- DAX for Calculations
  - Introduction to DAX basics
  - Creating calculated columns and measures
  - Hands-On Labs
    - Writing DAX for custom calculations
    - Applying DAX for dynamic report values

WEEKEND 9: ADVANCED VISUALIZATIONS AND INTERACTIVE DASHBOARDS

- Advanced Data Visualizations
  - Maps, gauges, and KPI visuals
  - Using Power BI themes and templates
- Hands-On Labs for Advanced Visualizations
  - Adding geographic data to reports
  - Customizing reports with themes for branding
- Interactive Dashboards
  - Building dashboards with multiple visuals
  - Using bookmarks and drill-through functionality
- Hands-On Labs for Interactive Dashboards
  - Creating a comprehensive dashboard with interactive features
  - Presenting data in a user-friendly format

WEEKEND 10: PUBLISHING REPORTS AND FINAL PROJECT PLANNING

- Publishing and Sharing Reports
  - Publishing to Power BI Service
  - Managing report access and permissions
- Hands-On Labs for Publishing
  - Publishing a report to Power BI online
  - Configuring report settings for access control
- Final Project Planning
  - Overview of final project requirements
  - Structuring a data project from start to finish
- Hands-On Labs for Project Planning
  - Planning a project roadmap for data analysis
  - Defining project objectives and key insights

WEEKEND 11: FINAL PROJECT WORKSHOP AND REHEARSAL

- Final Project Workshop (1.5 hours)
  - Guidance on integrating Excel, SQL, and Power BI skills
  - Project troubleshooting and Q&A
  - Hands-on support in developing final project components
- Project Rehearsal and Feedback (1.5 hours)
  - Mock presentations and peer feedback
  - Tips on effective data storytelling
  - Practicing presentations with feedback
  - Final adjustments for project completion

WEEKEND 12: FINAL PRESENTATIONS AND COURSE WRAP-UP

- (1.5 hours): Final Presentations
  - Students present their final projects
  - Tutors provide feedback on project execution and presentation
- (1.5 hours): Course Wrap-Up and Certification Guidance
  - Summary of Excel, SQL, and Power BI pathways
  - Guidance on certification options and next steps in data analytics