



POWER BI

with
Advanced SQL



Introduction to Power BI

- WHAT IS BUSINESS INTELLIGENCE (BI)?
- EVOLUTION OF BI TOOLS
- WHY POWER BI IN THE DATA ANALYTICS MARKET
- POWER BI VS TABLEAU VS EXCEL VS QLIK
- POWER BI USE CASES ACROSS INDUSTRIES (IT, FINANCE, HEALTHCARE, RETAIL)
- POWER BI ARCHITECTURE OVERVIEW
- COMPONENTS OF POWER BI:
 - POWER BI DESKTOP
 - POWER BI SERVICE
 - POWER BI MOBILE
- CAREER ROLES USING POWER BI (DATA ANALYST, BI DEVELOPER)

Overview of Power BI Tool

- INSTALLING POWER BI DESKTOP
- POWER BI INTERFACE WALKTHROUGH
 - RIBBON, VIEWS (REPORT, DATA, MODEL)
- POWER BI WORKFLOW (DATA → MODEL → VISUALIZE → PUBLISH)
- UNDERSTANDING:
 - REPORTS
 - DASHBOARDS
 - DATASETS
- POWER BI LICENSING (FREE, PRO, PREMIUM)
- POWER BI SERVICE NAVIGATION

Charts & Visuals

BASIC VISUALS

- TABLE & MATRIX
- CARD & MULTI-ROW CARD
- BAR CHART VS COLUMN CHART
- LINE & AREA CHARTS
- PIE & DONUT CHARTS (BEST PRACTICES)

ADVANCED & ANALYTICAL VISUALS

- COMBO CHARTS
- WATERFALL CHART
- FUNNEL CHART
- SCATTER PLOT
- KPI VISUAL
- GAUGE CHART
- TREE MAP

MAPS & GEO VISUALS

- MAP
- FILLED MAP
- SHAPE MAP

WHEN & WHY TO USE EACH CHART

- BUSINESS SCENARIOS PER VISUAL
- COMMON MISTAKES IN VISUAL SELECTION
- VISUAL STORYTELLING PRINCIPLES
- CUSTOM VISUALS FROM APPSOURCE

- DATA SOURCES:
 - EXCEL, CSV, TEXT
 - SQL SERVER, MYSQL, ORACLE
 - AZURE, SHAREPOINT
 - WEB & APIS
- POWER QUERY EDITOR OVERVIEW
- DATA CLEANING TECHNIQUES:
 - REMOVE DUPLICATES
 - HANDLE NULLS & ERRORS
 - CHANGE DATA TYPES
- TRANSFORMATIONS:
 - MERGE QUERIES
 - APPEND QUERIES
 - SPLIT & MERGE COLUMNS

**Connecting
& Shaping
the Data**

Creating Data Model

- CONDITIONAL COLUMNS
- INDEX COLUMNS
- M LANGUAGE BASICS
- QUERY FOLDING CONCEPT

- WHAT IS DATA MODELING?
- FACT TABLES & DIMENSION TABLES
- STAR SCHEMA VS SNOWFLAKE SCHEMA
- RELATIONSHIPS:
 - ONE-TO-MANY
 - MANY-TO-MANY
- CARDINALITY & CROSS FILTER DIRECTION
- ACTIVE VS INACTIVE RELATIONSHIPS
- BEST PRACTICES FOR OPTIMIZED DATA MODELS
- ROLE-PLAYING DIMENSIONS (DATE TABLES)

Calculated Fields

- CALCULATED COLUMNS
- CALCULATED TABLES
- MEASURES VS COLUMNS (KEY DIFFERENCES)
- ROW CONTEXT VS FILTER CONTEXT
- USE CASES FOR CALCULATED FIELDS
- PERFORMANCE IMPACT OF CALCULATED COLUMNS

Visualizing Data & Building Reports

- DESIGNING INTERACTIVE REPORTS
- SLICERS & FILTERS:
 - PAGE-LEVEL
 - REPORT-LEVEL
 - VISUAL-LEVEL
- DRILL DOWN & DRILL THROUGH
- TOOLTIPS (STANDARD & REPORT PAGE)
- BOOKMARKS & BUTTONS
- DYNAMIC TITLES

- FORMATTING & BRANDING REPORTS
- PUBLISHING REPORTS TO POWER BI SERVICE
- CREATING DASHBOARDS
- SHARING & EXPORTING REPORTS

- AI VISUALS OVERVIEW
- KEY INFLUENCERS VISUAL
- DECOMPOSITION TREE
- Q&A VISUAL (NATURAL LANGUAGE QUERIES)
- SMART NARRATIVES
- ANOMALY DETECTION
- AUTO ML (INTRO)
- AI USE CASES IN BUSINESS REPORTING

- REPORT PERFORMANCE ISSUES
- PERFORMANCE ANALYZER
- OPTIMIZING:
 - DATA MODEL
 - DAX CALCULATIONS
 - VISUALS
- REDUCING FILE SIZE
- BEST PRACTICES FOR FASTER REPORTS
- IMPORT VS DIRECTQUERY VS LIVE CONNECTION
- INCREMENTAL REFRESH
- AGGREGATIONS

- MONTHLY POWER BI UPDATES OVERVIEW
- NEW VISUALS & ENHANCEMENTS
- ON-OBJECT INTERACTION
- MODERN VISUAL FORMATTING
- COPILOT IN POWER BI (OVERVIEW)
- BEST WAYS TO STAY UPDATED WITH POWER BI CHANGES
- FEATURE ENABLEMENT IN PREVIEW

Artificial Intelligence in Power BI

Power BI Optimization & Performance Tools

New Power BI Features & Updates

DAX

(DATA ANALYSIS EXPRESSIONS)
– ADVANCED

DAX FUNDAMENTALS

- DAX SYNTAX & STRUCTURE
- COMMON FUNCTIONS:
 - SUM, AVERAGE, COUNT
 - CALCULATE, FILTER
- TIME INTELLIGENCE:
 - YTD, QTD, MTD
 - SAMEPERIODLASTYEAR
 - DATEADD

ADVANCED DAX

- CONTEXT TRANSITION
- ALL, ALLEXCEPT
- RANKX
- IF, SWITCH
- VARIABLES IN DAX
- DYNAMIC MEASURES
- DAX OPTIMIZATION TECHNIQUES
- REAL-TIME BUSINESS SCENARIOS USING DAX

- SQL BASICS REFRESHER
- JOINS (INNER, LEFT, RIGHT, FULL)
- SUBQUERIES
- CTES
- WINDOW FUNCTIONS (ROW_NUMBER, RANK)
- AGGREGATIONS & GROUPING
- WRITING OPTIMIZED QUERIES FOR POWER BI
- SQL VS POWER BI TRANSFORMATIONS

**Advanced
SQL**

COURSES OFFERING



**JAVA
FULLSTACK**



**PYTHON
FULLSTACK**



**UI
FULL STACK**



LINUX



**CLOUD
COMPUTING**



**DEVOPS
WITH AWS**



DSA



**SYSTEM
DESIGN**



**SOFTWARE
TESTING**



**CYBER
SECURITY**



**DATA
SCIENCE**



**DATA
ANALYTICS**

Our Recently Placed Students

Now it's Your Turn!

