



LiveTech

Since 2004



DATA ANALYTICS with AI

Using PowerBI with SQL Server



Best Training and Placements Institute



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About LiveTech

LiveTech was founded in 2004 by IT industry professionals to impart quality training and carve a niche in the IT training industry. LiveTech has successfully skilled 100000+ professionals in Software Testing and Development Domain. LiveTech is involved in training on Software Courses for over 21+ years. LiveTech is a leader in creating not only skilled professionals but also enhance their Employability through real time project implementation Training in Software Testing and Development. The programs are designed by Industry experts and backed by certifications recognized globally in I.T Solutions.

Data Analytics

Module 1 : SQL SERVER

Module 2 : POWER BI

Module 3 : ADV. EXCEL

Module 4 : PYTHON PROGRAMMING

Module 5 : TABLEAU BASICS & AI TOOLS

PowerBI with SQL Server

Module 1 : SQL SERVER

Introduction to Basic Database Concepts

- What is Data. Field, Record and database?
- Limitations of File Management System.
- Basic Concepts at Advantages of DBMS.
- Levels of Abstraction. Database Models.
- Exploring Relational DBMS
- Understanding Client and Server

E-R Modelling and Diagram

- Analyzing the Requirement
- Identify Entities and their Relationships
- Drawing E-R Diagram
- Conversion of E-R. Diagrams into Tables

Normalization

- First Normal Form
- Second Normal Form

- Third Normal form

- Practically Normalizing Tables

Introduction to SQL Server

- What is SQL Server Version history and different editions
- Basic Features Components and Tools
- Starting and stopping SQL server
- Instances / Services
- Introduction to Management Studio
- Types of System Databases in SQL

Introduction to SQL

- Basics of SQL Types of SQL Statements
- DDL, DML, DQL DCL and TCL
- Create Database using Management Studio

- Data types in SQL Server
- Exploring DDL Statements on Table using Management Studio

DDL & DML STATEMENTS

- Why write statements in Frontends?
- Create, Alter and Drop Table Insert,
- Update and Delete Statement
- Truncate Statement

Working With QUERIES(DQL)

- Understanding Select Statement
- Usage of Top, Distinct, Null etc. keywords
- Using String and Arithmetic Expressions
- Exploring Where Clause with Operators
- Using Advanced Operators
- Sorting data using Order By clause
- Working with basic of Sub Queries

Aggregate Functions

- Using functions in Queries
- Using predefined functions
- Count, Sum, Min, Max, Avg
- Group by and Having Clause
- Using Group by with Rollup and Cube

Joins and Set Operations

- Introduction to Joins, Cross Joins
- Inner Join
- Outer Join
- Self-Join
- Co-related Sub Queries
- Set Operations using Unions,
- Intersect and Except

Implementation of Data Integrity

- Entity integrity
- Domain Integrity
- Referential integrity
- Types of constraints

Working with constraints

- Unique
- Not NULL
- Primary Key
- Default Check Foreign Key

Implementing Views

- Introduction & Advantages of Views
- Creating, Altering, Dropping Views
- Advance Options while Creating a View

Date Control language (DCL)

- Creating Users & Roles
- Granting & Revoking of Roles & privileges
- Managing using Management Studio

Working with Indexes

- Introduction to Clustered and
- Non-Clustered Index
- Creating and Dropping indexes

Writing Transact-SQL (T-SQL)

- What is T-SQL
- Scripts and batches Declaring Variables
- Using Statements
- Working with Temp Tables
- Error handling
- Using System Functions/ Global Variable using Dynamic SQL

Working with Stored Procedures & Functions

- Introduction to stored Procedures
- Benefits of stored procedures
- Creating, executing, modifying, Dropping
- Input-Output and operational parameters
- System defined SP's and Functions
- User Defined functions

Implementing Triggers

- Introduction to triggers Constraints vs Triggers
- Creating, Altering, Dropping triggers
- for/after/instead of triggers
- Using Rollback Tran

Working with Cursors

- Creating Cursors
- Cursors vs. Select
- Types of cursors
- Locks on cursors
- Advantages of cursors

Transaction Control language (TCL)

- Introduction to transaction process
- Types of transactions (implicit. explicit)
- Working with Locks, Types of locks

Backup and Restore

- Generating SQL Script
- executing SQL Script
- Generating Change Script

- Taking database' Backup
- Restoring database using backup
- Attaching and detaching of database

Advanced Features

- Pivot Table
- Common Table Expression
- Ranking Functions Using BLOB data type
- Using XML data type

Module 2 : Power BI (SQL SERVER INTRODUCTION)

Data, Databases and RDBMS Software

- Database Types: OLTP. DWH. OLAP
- Microsoft SQL Server Advantages, Use
- Versions and Editions of SQL Server
- SQL: Purpose, Real-time Usage Options
- SQL versus Microsoft T-SQL. [MSSQ
- Microsoft SQL Server - Career Options
- SQL Server Components and Usage
- Database Engine Component and OLTP
- BI Components, Data Science Components
- ETL, MSBI and Power BI Components
- Course Plan, Concepts, Resume, Project
- 24 X 7 online labs for Remote DB Access
- Software Installation Pre-Requisites

Introduction to POWER BI

- Power BI Job roles in Real-time
- Power BI Data Analyst job Roles
- Business Analyst - Job Rolec
- Power' BI Developer -job Roles
- Power BI for Data Scientists
- Comparing MSBI and Power BI
- Comparing Tableau and Power BI
- MCSA 70-778. MCSA 70-779 Exam
- Types of reports in Real-World
- Interactive & Paginated Reports
- Analytical & Mobile Reports
- Data Sources Type in Power BI
- Power BI Licensing Plans -Types
- Power BI Training Lab Plan
- Power BI Development Environments
- Power BI Production Environments
- Understanding the Power BI Tools
- Installing Power BI & Connecting to Data

- The "Locale" used in the curriculum
- Working with thee query Editor
- Working with the data model and creating a Visualization

BASIC REPORT DESIGN

- Power BI Desktop Installation
- Data Sources & Visual Types
- Canvas, Visualizations and Fields
- Get Data and Memory Tables
- In-Memory xvelocity Database
- Table and Tree Map Visuals
- Format Button and Data Labels
- Legend, Category and Grid
- PBIX and PBIT File Formats
- Visual Interaction, Data Points
- Disabling Visual Interactions
- Edit Interactions - Format Options
- SPOTLIGHT & FOCUSMODE
- CSV and PDF Exports. Tooltips
- Power BI Eco System, Architecture

Visual Sync, Grouping

- Slicer Visual: Real-time Usage
- Orientation, Selection Properties
- ingle & Multi Select, CTRL Options
- Slicer: Number, Text and Date Data
- Slicer List and Slicer Dropdowns
- Visual Sync Limitations with Slicer
- Disabling Slivers, Clear Selections
- Grouping: Real-Time Use, Examples
- List Grouping and Binning Options
- Grouping Static / Fixed Data Values

- Grouping Dynamic / Changing Data
- Bin Size and Bin Limits (Max, Min)
- Bin Count and Grouping options
- Grouping binned data, Classification.

Hierarchies, Filters

- Creating hierarchies in Power BI
- Independent Drill-Down options
- Dependant Drill-Down options
- Conditional Drilldowns, Data points
- Drill Up Buttons and Operations
- Expand & Show Next Level Options
- Dynamic Data Drills limitations
- Show Data and See Records
- Filters: Types and Usage in Real-time
- Visual Filter, Page Filter, Report Filter
- Basic, Advanced and TOP N Filters
- Category and Summary level Filters
- Drill Thru Filters, Drill Thru Reports
- Keep All Filters "Options in Drill Thru
- Cross Report Filters, Include, Exclude

Bookmarks, Azure, Modelling

- Drill-thru Filters, Page Navigations
- Bookmarks: Real-time Usage
- Bookmarks for Visual filters
- Bookmarks for page Navigations
- Selection pane with Bookmarks
- Buttons Images with Action
- Buttons, Action, and Text URLs
- Bookmarks View & Selection Pane
- OLTP Databases, Bid Data Sources
- Azure Database Access, Reports
- Import & Direct Query with Power BI
- SQL Queries and Enter Dara
- Data Modelling Currency, Relations
- Summary, Format. Synonyms
- Web View & Mobile View in PBI

Visualization Properties

- Stacked charts and Clustered Charts
- Line Charts, Area Charts, bar Charts

- 100% Stacked bar & Column Charts
- Map Visuals: Tree, Filled, Bubble
- Cards, funnels, table, Matrix
- Scatter Chart: Play Axis, Labels
- Series Clusters & Selections
- Waterfall Chart and ArcGIS Maps

Power Query level-1

- Power Query M language Purpose
- Power Query Architecture and ETL
- Data Types, Literals and Values
- Power Query Transformation Types
- Table & Column Transformations
- Text and Number Transformations
- Date, Time and Structured Data
- List, Record and Table Structures
- Let, source, in statements @ M Lang
- Power Query Functions,
- Power Query Parameters
- Invoke Functions. Execution Results
- Get Data, Table Creations and Edit
- Merge and Append Transformations
- Join kinds, Advanced Editor, Apply
- ETL Operations with power Query

Power Query Level-2

- Query Duplicate, Query Reference
- Group by and Advanced options
- Aggregations with power query
- Transpose, Header Row Promotion
- Reverse Rows and Row Count
- Data Type Changes & Detection
- Replace Columns: Text, NonText
- Replace Nulls: Fill Up, Fill Down
- PIVOT, UNPIVOT Transformations
- Move Column and Split Column
- Extract, Format and Numbers
- Date & Time Transformations
- Deriving Year, Quarter, Month, Day
- Add Column: Query Expressions
- Query Step Inserts and Step Edits

Power Query Level-3

- Creating parameters in Power Query
- Parameter Data Types, Defaults Lists
- Static/Dynamic Lists for Parameters
- Removing Columns and Duplicates
- Convert Tables to List Queries
- Linking Parameters to Queries
- Testing Parameters and PBI Canvas
- Multi-valued Parameter Lists
- Creating Lists in Power Query
- Converting Lists to Table Data
- Advanced Edits and Parameters
- Data Type Conversions, Expressions
- Columns from Examples, Indexes
- Conditional Columns and Expressions

DAX Functions - Level 1

- DAX: Importance in Real-time
- Real-world usage of Excel, DAX
- DAX Architecture, Entity Sets
- DAX Data Types, Syntax Rules
- DAX Measures and Calculations
- ROW Context and Filter Context
- DAX Operators, Special Characters
- DAX Functions, Types in Real-time
- Vertipaq Engine, DAX Cheat Sheet
- Creating, Using Measures with DAX
- Creating, Using Columns with DAX

- Quick Measures and Summaries
- Validation Errors, Runtime Errors
- SUM, AVERAGEX, KEEPFILTERS
- Dynamic Expressions, IF in DAX

DAX Functions - Level 2

- Data Modelling Options in DAX
- Detecting Relations for OAX
- Using Calculated Columns in DAX
- Using Aggregated Measures In DAX
- Working with Facts & Measures
- Modelling: Missing Relations
- Modelling: Relation Management
- CALCULATE Function conditions
- CALCULATE & ALL Member Scope
- RELATED & COUNTROWS In DAX
- Entity Sets and Slicing in DAX
- Dynamic Expressions. RETURN
- Date, Time and Text Functions
- Logical, Mathematical Functions
- Running Total & EARLIER Function

DAX Functions - Level 3

- Connection with CSV, MS Access
- AVERAGEX and AVERAGE in DAX
- KEEPFILTERS and CALCULATE
- COUNTROWS, RELATED, DIVIDE
- PARALLELPERIOD, DATEDADD

Module 3 : Advanced Excel

Introduction to Excel:

- What is Excel & its complete History
- Basic terminology of Excel
- Spreadsheet environment & Object Model of Excel
- Different versions of Excel and what is new in each version of it
- Different file formats -.xls,.xlsx,.xlsm,.xlsb,.xlam,.csv... etc., and when to use which format of Excel
- How to customize your Excel according to your requirement.
- R1C1 Reference Style VS A1 Reference Style

- Understanding of Excel Structure
- Cell Properties

Auto fill:

- Value based Autofill
- Text Autofill
- Date Autofill
- Custom and Justify

Formatting:

- Number formatting: General, Number, Currency, Accounting, Short Date, Long Date, Time, Percentage, Fraction, Scientific

- Custom number formatting and where you can create your own number formatting
- Advance techniques in Number formatting.
- Date and time Formatting

Filter:

- How to apply filters on Text, Date & Numbers
- How to filter your data using Cell colour, Font Colour, Cell Icon & Values
- Advanced Filter for Complex Criterion

Sorting:

- How to apply sort on Text, Date & Numbers
- How to sort your data using Font colour, Text Colour & Custom
- Custom sorting

Conditional formatting:

- What is Conditional formatting
- How to change the existing formatting using this feature
- Quick format technique to highlight Duplicate/Unique values
- Writing Complex Conditional Formatting rules using formulas
- Interview Related Questions related

Excel Formulas:

- Cell Reference Styles: Relative, Absolute and Mix
- We will discuss all above reference styles with examples and will explain how to use these Styles in formulas

Working with Formulas:

- Understanding the concept of a formula
- Understanding the Mathematical operators & Comparative operators
- Boolean Logic in Excel
- Referencing Functions
- How many ways you can write a formula in a cell
Literal values, Cell References & Formula
- Creating formulas
- Text Functions - Ex: Find, Search, Left, Right, Mid, Len, Trim.

- Date and Time Functions - Ex: NetWorkDays, EDate, Weekday...
- Lookup & Reference Functions – Ex: Index, Match, VLOOKUP, Offset, Indirect....
- Mathematical Functions – Ex: Fact, Abs, Mod, Rand Between, Sumifs...
- Statistical Functions - Ex: Countifs, Median, Large, Small, Rank....
- Information Functions – Ex: Cell, IsError, ErrorType, IsLogical....
- Logical Functions – Ex: If, And, Or, Not, IfError
- Financial Functions – Ex: PMT, PPMT, IPMT, PV, RRI, PRICE & NPV.
- What are volatile functions in Excel & list of Volatile Functions
- Formula auditing
- Circular Reference error
- Formula Error Types -#DIV/0, #NULL, #VALUE, #REF, #N/A, #NUM
- How to fix Formula Errors

“As we know that formulas are heart of excel, we teach around 150 formulas to make you awesome in Excel”

Pivot Table (PT) & Pivot Chart:

- What is Pivot Table
- Insert Pivot Table - different types
- Pivot Table Fields Section
- Pivot Table Areas Section (Rows, Columns, Values & Filter)
- How to make your PT dynamic without changing the data source every time
- How to insert Slicers in Pivot Table
- Difference between Slicer and Report Filter
- How to Connect Multiple Pivot Tables using Slicers
- How to insert Calculated Field/Formula in PT
- Pivot Table Value field settings
- Insert Timeline in PT
- Grouping/Ungrouping of fields

Creating Charts and Graphics

- Various charts - Bar, Column,
- Line, Area, Pie, Bubble & etc.,
- Combo Charts
- Objects in Charts, Working with
- Objects of Chart
- Dynamic charts and Dynamic
- data source for charts

Data Protection Techniques

- Worksheet protection
- How to protect specific range
- Allowing users to edit the protected range
- Workbook protection and Encryption
- Hide formulas

Printing and viewing worksheet:

- Adjusting Margin, Orientation, and paper size
- Understanding print area and Page break
- Providing watermark in Excel
- Giving Print titles
- Adjusting page order and scale
- Giving Header and footer

Data Validation:

- Apply data validation
- Types of data

- Applying custom validation
- Input message
- Alter Error alert

Define Name:

- Apply Define Name
- How to use

Hyperlink:

- What is Hyperlink
- Different types of hyperlinks
- How to apply it

What if Analysis:

- Goal Seek
- Scenario Manger
- Data Table - Create Loan Table

Data Outline and Consolidate:

- Group
- Ungroup
- Subtotal
- Data Consolidate

Recording Macro:

- Enable developer tab
- Use relative reference
- Recording Macro
- Learn through projects
- Types to run macros

Module 4 : Python Programming

Python Programming

- What is Python?
- History
- Why is Python preferred for Data Science?
- Installation of I python/Jupyter
- Notebook/ SPYDER

Basics of Python

- Keywords
- Built-in functions
- String Formatting
- Lists
- Loops
- Tuples
- Indexing

- Slicing
- Sequences
- Dictionaries
- Sets
- Importing and exporting data from python into various formats

Error and Exception handling

- Errors in Python
- Abnormal termination
- Exception handling methods
- Ignoring Errors
- Assertions and effective usage of assertions

Functions

- User defined functions
- Parameters
- Nested functions
- Local and Global variables
- Alternate Keys
- Lambda Functions
- Sorting Lists and Dictionaries
- Sorting Collections

OOPS

- Methods and Inheritance
- Abstraction and Encapsulation
- Classes
- Walking Directory Trees
- Initializes
- Instance methods
- Class methods
- Data Static Methods
- Expressions
- Module Aliases
- Math functions
- Random Numbers

- Package Installation Methods
- Introduction to NumPy, Pandas and other libraries
- Plotting in Python
- Creating Data Frames
- Data Manipulation
- Slicing and Dicing

MODULES

- Pre-defined /Built in Modules
- User Defined Modules
- How to import a module

Data Types: (In Detail)

- List
- Tuple
- Sets
- Dicts
- Functions related to all data types
- Control Flows

Minimum 3 Practical Sessions for control flows and Loops

Module 5 : Tableau Basics & A.I Tools

Tableau (Only Basic Info)

- What is Tableau
- What is data Visualization
- Tableau Products
- Tableau Desktop Variations
- Tableau file extensions
- Tableau Desktop Installation
- Data Source (basic Overview)
- Live vs Extract

AI Components

- Chatgpt
- Copilot

Interview Preparations

- Mock Interviews
- Seminars
- Written Tests
- Resume Preparations
- Placement Assistance

Faculty :
Date :
Time :
Duration :
Fee :
Comments :

1000+ Recruitment Partners



Placed Students

 G.Sravani Black Hawk CTC: 10 LPA	 T. Premsai Zemoso CTC: 6.89 LPA	 V. Balaraju Zemoso CTC: 6.89 LPA	 SN. Nagarjuna Cerner CTC: 6.0 LPA	 Anjali Kumari e-Team info services CTC: 4.5 LPA	 D. Supriya First American CTC: 4.4 LPA	 CH. Mohan Gopi Krishna First American CTC: 4.4 LPA	 K. Alekhya Darwinbox CTC: 4.32 LPA	 K. Bhanu Darwinbox CTC: 4.32 LPA	 G.Venkatesh Darwinbox CTC: 4.32 LPA	 M.Sravani IBM CTC: 4.2 LPA
 D.Vishnu Sagar Delta Technology CTC: 4.0 LPA	 MD. Rashid Jawaid Delta Technology CTC: 4.0 LPA	 N.Spandana Delta Technology CTC: 4.0 LPA	 A. Jaya Krishna Delta Technology CTC: 4.0 LPA	 K. Alekhya Delta Technology CTC: 4.0 LPA	 N.Kavya Delta Technology CTC: 4.0 LPA	 G. Rambabu JD Sports Fashion CTC: 4.0 LPA	 D. Srividya Darwinbox CTC: 4.0 LPA	 A. Satya Prakash Corpus CTC: 3.6 LPA	 N.Suresh Corpus CTC: 3.6 LPA	 S. Divya Infosys CTC: 3.6 LPA
 M. Lokesh Reddy Infosys CTC: 3.6 LPA	 KL.V. ShivaSai Darwinbox CTC: 3.6 LPA	 T. Vineetha Darwinbox CTC: 3.6 LPA	 Sushmitha TCS CTC: 3.53 LPA	 C. Hasini Gaiian Solutions CTC: 3.5 LPA	 M.Ramya Gaiian Solutions CTC: 3.5 LPA	 M. Shivakumar Gaiian Solutions CTC: 3.5 LPA	 B. Sandhya Rani Gaiian Solutions CTC: 3.5 LPA	 E. Bharathi Gaiian Solutions CTC: 3.5 LPA	 D. Sowmya Gaiian Solutions CTC: 3.5 LPA	 B. Sravani TCS CTC: 3.5 LPA
 V. Rakesh Defteam CTC: 3.5 LPA	 Ajay Jikare TCS CTC: 3.36 LPA	 Govind Dasharath TCS CTC: 3.36 LPA	 K.Tharun Piersoft CTC: 3.0 LPA	 B. Ananya Pronix CTC: 3.0 LPA	 Poorna Cappgemini CTC: 3.0 LPA	 T. Kalyankar Infosys CTC: 3.0 LPA	 Vijay Reddy NCR CTC: 3.0 LPA	 M. Vandana Smart Data CTC: 3.0 LPA	 M. Gopi Smart Data CTC: 3.0 LPA	 S.Venkat Reddy Aryagami Cloud CTC: 2.76 LPA

Courses We Offer

Testing Programs

-  **Testing Tools**
Functional Test Engineer
-  **Manual Testing**
Manual Test Engineer
-  **Selenium Testing**
Automation Test Engineer
-  **TOSCA**
TOSCA Test Engineer
-  **API&ETL Testing**
API Test Engineer
-  **Performance Testing**
LoadRunner & JMeter

Developing Programs

-  **Full Stack Java**
Full Stack Java
-  **Core Java**
Core Java
-  **Adv Java & Frameworks**
Adv Java & Frameworks
-  **Full Stack Python**
Full Stack Python
-  **Python Programming**
Python Programming
-  **DJANGO & Frameworks**
DJANGO & Frameworks

Advanced Programs

-  **DevOps**
DevOps Engineer
-  **Data science with AI**
Data science with AI
-  **Data Analytics**
Data Analytics
-  **Selenium with C#**
Selenium with C#
-  **Playwright Automation**
Playwright Automation
-  **Python with Selenium**
Python with Selenium

Training Methodology

Class room Training



Project Training



Resume Preparation



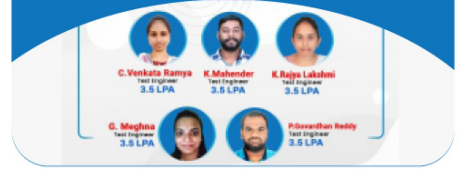
Certification



Interview Preparation



Placement Assistance



Our Infrastructure

