Beginner to Intermediate SQL & AI Prompt Engineering Training Curriculum

SQL Training Topics

Database structure

Order by

Where

Group By

Aggregate functions

Having

Joins (Inner and Full)

Calculated fields

Text, dates, and numeric data types

Case statements

Training Syllabus

Database Structure and Data Types

Overview of relational databases, data flow, and review common SQL terms

Database, schema, and tables overview

Retrieving Data from a Single Table

Retrieve data from a single table via the utilization of **SELECT** and **FROM** statements

Sorting data using **ORDER BY** statements

Filtering, Calculating, and Aggregating Data

Utilize conditional operators to filter data using **WHERE and HAVING** statements

Perform mathematical operations on multiple fields via **calculated fields** and **aggregate functions**

Summarize aggregated data by categories while using **GROUP BY**

AI Integration: AI-assisted error checking and troubleshooting

Retrieving Data from Multiple Tables

Retrieve data from at least 4 - 8 tables using various forms of **JOINS**

AI Integration: Debugging JOIN errors with AI assistance

Logic Statements

Apply logic statements (If/then) to table data via **CASE** statements

Training Syllabus (Cont.)

AI Prompt Engineering Essentials

What is Prompt Engineering?

Crafting clear prompts for accurate SQL responses

Common prompt patterns (diagnostic, corrective, generative)

eXcelerate

DATA TELLS A STORY. BE THE STORYTELLER