Advanced SQL Automation and Excel Data Analysis Boot Camp:
Prerequisites and Curriculum

About the Boot Camp

This SQL Boot Camp is designed to help analysts strengthen their ability to work with complex datasets by combining advanced SQL techniques with practical Excel-based analysis. Participants will learn how to merge and compare data using unions, structure queries with subqueries and CTEs, and apply CASE statements to handle real-world business logic and decision-making scenarios.

The boot camp also introduces SQL automation through stored procedures, enabling students to reduce manual effort and create repeatable, scalable workflows. To round out the experience, learners will use Excel to analyze, validate, and communicate SQL results effectively—bridging the gap between querying data and delivering clear, actionable insights.

SQL Prerequisites Topics

Database structure

Order by

Where

Group By

Aggregate functions

Calculated fields

Text, dates, and numeric data types

Date functions

Joins

Advanced filtering

    Filtered aggregated data (Having)

    Partial matches

    Either/or filter conditions

SQL Topics Required to Know

Database Structure and Data Types

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

Database, schema, and tables overview

Retrieving, Sorting, and Limiting Data from Single and Multiple Tables

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

Retrieve data from multiple tables via the utilization of various **JOIN** types

Sorting and limiting data using **ORDER BY and LIMIT** statements

Filtering, Calculating, and Aggregating Data

Utilize conditional operators to filter partial and non-partial data using **WHERE** statements

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

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

Utilize **HAVING** to filter on aggregated data

Date Extracting, Calculation, Filtering, and Grouping

Extract the year, quarter, month, and day from date column

Calculate the difference between dates

Predict future dates

Filter using date functions

Group data using date functions

Excel Prerequisites Topics and Skills to Know

Office 365

Creating new worksheets

Hiding worksheets

Deleting worksheets

Locating a cell

Data entry (inputting data into a cell)

Know the difference between columns and rows

Copying and pasting data

Opening a workbook

Know the difference between a workbook vs. worksheet

Saving a workbook

Inserting and deleting rows and columns

Formatting (Font, borders, alignments, data types)

Boot Camp Curriculum/Course Topics
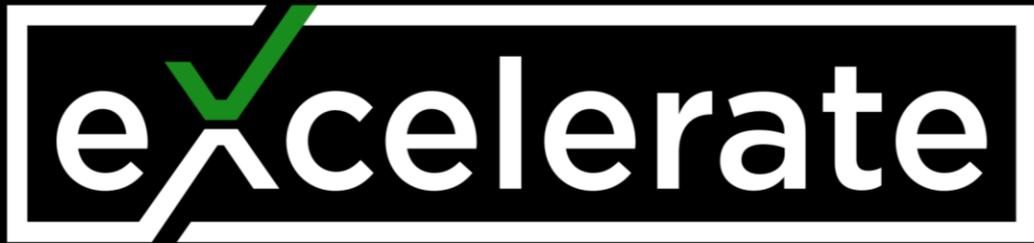
Unions

CTEs (Common Table Expressions)

Subqueries

Case Statements

Stored Procedures/Automation

Excel Data Analysis

> We will extract data using SQL and populate a pre-built Excel report, then update and analyze the data to generate KPI-driven insights.

eXcelerate

DATA TELLS A STORY. BE THE STORYTELLER