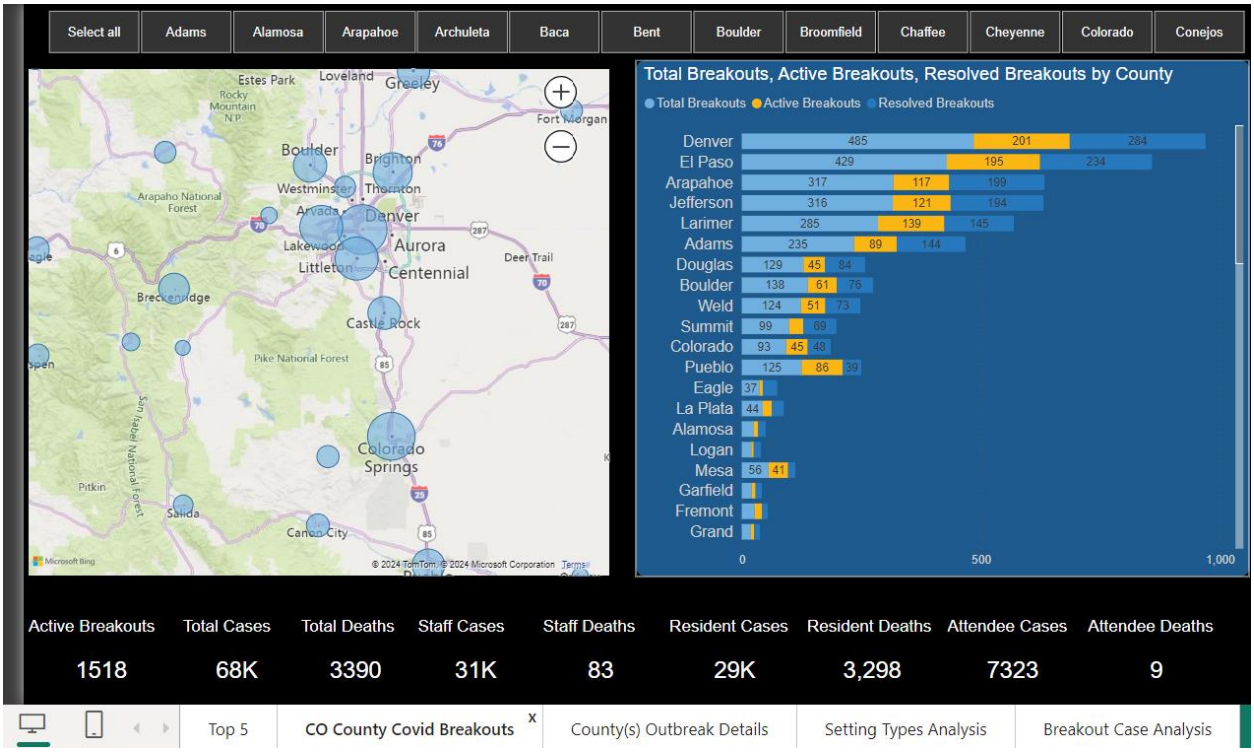
B Robert Carmel
Course: Building an Enterprise Data Intelligence Solution
Using SQL Server, SSIS, Power BI and Python
Introduction and Course Outline



Introduction

The Building an Enterprise Data Intelligence Solution course is an extension of the Building a Database Warehouse Data Pipeline course. It includes 20 lessons where students will create a real-world data intelligence solution using the Microsoft technology stack and some Python scripts for data analysis.

Students should have a good understanding and working knowledge of SQL Server database and SQL programming prior to taking this course.

The cost of this 20-lesson course is $2,495. Students may be eligible for a 20% discount.

Students who have previously taken my course, Building a Database Warehouse Data Pipeline will be given a 60% discount on this course.

I will be working closely with students during the entire course to ensure that they understand the material and complete the lesson's hands-on training.

This is an intermediate data engineering course that provides students with the opportunity to build a real-world data intelligence solution using the Microsoft

technology stack. Students will create several Power BI report visualizations from the database warehouse.

Students will first complete the Building a Database Warehouse Data Pipeline course to learn how to transform text files downloaded from the Colorado Health Department into a dimensionally modeled database warehouse using Microsoft Visual Studio. SQL Server and SQL Server Integration Services (SSIS) and Transact SQL (T-SQL or SQL).

Students will then:

- Learn the key features of the Microsoft Power BI data visualization and analysis application.
- Review the case-study Power BI reports for the Colorado Covid solution.
- Re-engineer the Power BI reports and visuals for the Colorado Covid Solution.
- Integrate Python scripts into the reports for data analysis.

About Instructor B Robert Carmel

I have more than 25 years of experience working in Information Technology as a senior software and data engineer, solutions architect and technical trainer. I worked for several multi-national Fortune 500 companies in the USA:

Company	Industry	Position(s)
Texaco Inc.	Oil & Gas	Programmer Analyst
Lockheed Inc	Aerospace	Senior Analyst
Price Waterhouse Coopers	Management Consulting	Senior Information Systems Consultant
Roche Inc.	Pharmaceuticals	Senior Systems Consultant
Boulder County Mental Health Dept.	Government	Lead Programmer, Technical Trainer
Century Link Inc	Telecommunications	Lead Programmer Analyst
Wipro Inc	IT Consulting	Senior Solutions Architect, Technical Trainer

I am an excellent teacher and mentor. I have the patience and dedication to support new students who take on difficult challenges.

Lessons 1 - 10: Course: Building a Database Warehouse Data Pipeline

Students will complete the course Building a Database Warehouse Data Pipeline using SQL Server, SSIS and Visual Studio. This will create the database warehouse (Colorado Covid) that will be used in this course.

Refer to the Introduction and Course outline for the specific lessons included in this course.

Lesson 11: Install Microsoft Power BI

In Lesson 11, students will download and install the desktop version of Microsoft Power BI to their Windows computer.

Lesson 12: An Overview of Microsoft Power BI Development Platform

In Lesson 12, students review the major features of Power BI including establishing data connectivity, managing data and data models, a brief overview of the DAX language and the various Power BI report visualizations.

Lesson 13: Designing the Case-Study's Power BI Report Visuals.

Using the diagrams on the document, Build Power BI Visuals.pdf students will learn how the Power BI visuals were designed from the SQL Server Colorado Covid database warehouse.

Lessons 14: Connecting to and Analyzing the Course's Case-Study SQL Server Database Warehouse

In Lesson 13, students will connect Power BI to the course's case-study SQL Server database warehouse , Colorado Covid. Students will use the Power BI table and model views to analyze data. Students will also write the two DAX formulas used in the project.

Lessons 15 - 19: Building the Power BI Report Visuals

In Lessons 14 through 18, students will build (re-engineer) the Power BI report visuals for the Colorado Covid project.

1. Top 5 Report Visuals
2. CO Country Covid Breakouts Report Visuals
3. County(s) Breakout Report Visuals

4. Setting Types Analysis Report Visuals.
5. Coding the SSIS data pipeline tools with T-SQL to clean (transform) the source data.
6. Reviewing the SQL Server database stored procedure that is used to create the database warehouse.

Lesson 20: Python Scripts for Data Analysis

In Lesson 20, students will ad Python scripts to create several data analysis reports from the Colorado Covid data.