INNOVATICS

INNOVATION THROUGH ANALYTICS

Internet 2.0 Outstanding
Leadership Award - Dubai 2022

SQL FOR DATA SCIENCE

BATCH 4

14th November 2023

15 WEEKS PROGRAM

$899

SCAN TO REGISTER

www.innovatics.ai register@innovatics.ai +1 (315) 975-1661

Who is this Program for?

15-Week training program in SQL for Data Sciences & Artifitial Intelligence provides a hands-on introduction to the concepts, methods and processes of data analytics in business. It is designed for professionals looking to discover a new career path in data science or build on their existing technology career, and receive all of the career support that comes with it.

Upon completing this program, you will be ready to launch, build, or switch careers - to take advantage of new opportunities and be ready to face new challenges in the field of Data Science and Analytics. Whether it's smart grids, predictive marketing, automated factories, algorithmic trading, automation using machine learning, sensor data that is analyzed to create the Internet of things, or healthcare data that is being analyzed to create new therapies ... practically every industry, every company, and every professional is now using data to make decisions.

You will develop a data science portfolio that will help you join this growing community of data scientists, develop an Online reputation and presence, and show prospective employers what you can do.

Engineers / Associates / IT Professionals:
Software engineers in IT/ITES
Startup teams building
ML products/services

Data Analysts/Scientists & Business Analysts: Who want to transition to or progress into data science/ analytical roles and become more efficient and effective in data-driven decision-making.

Managers: Product managers, Program managers, General Managers, etc. interested in improving their analytical skills and effectively managing analytics, data science and machine learning projects

Consultants: Who are driving client projects and looking for acquiring and honing cutting edge analytical and data science skills for a career transition or progress

Key Takeaways

Build a working knowledge of data science

Identify the value in utilizing analytics tools

Gather the skills and confidence necessary to operate in a data-driven environment **Develop** the ability and intuition to judge "good" analytics"from "bad" analytics" **Understand** the importance of experimentation

platforms to drive business growth **Learn** how to tell a persuasive story with data visualization tools

Repeat unlimited time at no additional cost

MEET YOUR MENTOR

Mohammed Mujeeb

MBA - Microsoft Certified
24 yrs. Of Experience
Cybersecurity Program Director at Emory University

PROGRAM ADVISOR

Mo Medwani- Ph.D

4 - Master Degrees
23 yrs of Experience

Program Modules

Week 1	Program Orientation

Learning Objectives: The program begins with a lecture on "Why Learning Data Science is an Absolute Must!" where you will be introduced to the Data Science process, Data Science portfolio, analytics types, day-to-day activities, quantitative, and statistical techniques required, and the career path to start the journey.

Session 1	Program Orientation
	• Program Orientation (Agenda – Curriculum) • Innova tics Website | Canvas | Slack walk-through
Session 2	**Why should you become a Data Scientist?**
	• Data Explosion • Why Data Science? | What is Data Science? | Type of Analytics • Data Science Portfolio | Data Science Process | Career in Data Science

Week 2	SQL for Data Science: Relational Database Systems

Learning Objectives: In this module, we will learn about the Introduction to Databases, a Brief History of Database Application, Advantages of Using the DBMS, Characteristics of the Database Approach, Relational Databases and What SQL; installation of SQL server applications and client tools. as well as exploring reporting, analysis, and integration services.

Session 1	Relational Database Systems: An Introduction
	• Introduction to Databases | Relational Databases and Non-Relational Databases • Advantages of Databases • Characteristics of Database
Session 2	**Planning the Installation and Installing SQL Server**
	• Install the SQL Server Engine on the desktop/laptop. • Install SQL Server Management Studio (SSMS) • Exploring Reporting, Analysis, and Integration Services • Connecting to SQL Server

Week 3	SQL for Data Science: Tables and Constraints

Learning Objectives: In this module, Students will learn about creating and working with Databases, tables, Data Definition Language (DDL) and Data Manipulation Language (DML), Data Types SELECT, INSERT, UPDATE, AND DELETE Statements in SQL.

Session 1	Tables and Constraints
	• Creating Databases • Creating, and Working with Tables • Default Constraints • Cascading referential integrity
Session 2	**Tables, Constraints SQL Statements Group by Clause**
	• Check Constraint | Identity column. • Unique key constraint • SQL Statements (Select, Insert, Delete, Update) • Group by Clause • Difference between where and having in SQL server

Week 4	SQL for Data Science: Functions

Learning Objectives: In this module, we will learn about Joins, System Functions, User Define functions, Stored Procedures, Advantages of the stored procedure, Date, Mathematical functions, and Temp tables.

Session 1	Joins, Functions, and Stored Procedures
	• Basic Joins | Advance Joins | Self Joins • Different ways to replace NULL | Coalesce function. • Union and Union All • Advantages of stored procedures | Stored Procedures with output parameters
Session 2	**Built-in Functions Date and Mathematical Functions, Temporary Tables**
	• Build in string functions | Left, Right, Char index, and Substring functions. • Replicate, Space, Pat index, Replace, and Stuff functions. • Date Time functions | Is Date, Day, Month, Year, and Date Name functions. • Date Part, Date Add, and Date Diff functions | Convert and Cast functions. • Mathematical functions | Scalar User Defined functions | Temporary tables
Week 5	**SQL for Data Science: Indexes | Views |Triggers**
Learning Objectives: In this module, we will learn about different types of Indexes (Cluster and non-cluster indexes), Views, Triggers, Derived Tables, Sub and Correlated queries, and fundamentals of accessing SQL databases with Python.	
Session 1	**Indexes**
	• Clustered and No-Clustered Indexes • Unique and Non-Unique Indexes • Advantages and disadvantages of Indexes
Session 2	**View and Triggers, Derived Table, Subqueries**
	• Views | Updateable Views • Indexed Views | View Limitations • DML Triggers (Instead of Insert trigger, Instead of Update trigger, instead of delete trigger) • Derived table | Subqueries in SQL • Correlated subqueries
Week 6	**SQL for Data Science: Data Warehousing 1**
Learning Objectives: In this module, we will learn what data Warehousing is and the difference between Data Warehouse, database, Data Lake, and data warehouse architecture. We will learn the difference between OLTP and OLAP. Also, how to import and export data from any data source to and from a database. What is the Extract, Transform, and Load (ETL) process?	
Session 1	**Introduction to Data Warehousing**
	• What is a Data Warehouse | Benefits of Data Warehouse. • Difference between data warehouse, database, and data lake • Data warehouse architecture and design • Why do we need a Data Warehouse?
Session 2	**Data Warehousing**
	• What does a Data Warehouse look like? • The Ideal Data Warehouse • The Difference Between OLTP and OLAP • What is the Extract, Transform, and Load (ETL) process
Week 7	**SQL for Data Science: Data Warehousing 2**
Learning Objectives: In this module, we will Create/backup/restore the Data warehouse; What are Star and snowflake Schemas, the differences between them; the Fact tables, and dimension tables, the differences between them.	

Session 1	Creating, back up, and Restore Data warehouse
	• Create a data warehouse. • Backup and Restore data warehouse
Session 2	**Star and Snowflake Schema**
	• What is the Star Schema • What is Snowflake Schema • What is the difference between Star and snowflake Schema
Week 8	**SQL for Data Science: Data Warehousing 3**
Learning Objectives: In this module, we will work with the Fact tables and dimension tables and the difference between them.	
Session 1	**Facts and Dimension tables**
	• What are Facts tables? • What are Dimension tables?
Session 2	**Creating Facts and Dim tables**
	• Create Facts and Dimension tables
Week 9	**Data Visualization - Introduction Power BI**
Learning Objectives: In this module, we will learn Intro to Power BI, what is Power BI, and Power BI Features. loading data from various sources into Power BI.	
Session 1	**Introduction to Power BI, Components, Services**
	• Intro to Power BI • Power BI Feature / Components, Services • What is Power BI • Installing Power BI
Session 2	**Loading Data from Various sources into power BI**
	• Loading data from the database into Power BI. • Loading data from Excel into Power BI • Loading data from an API into Power BI
Week 10	**Data Visualization - Power BI Transform Data**
Learning Objectives: In this module, we will learn the Power BI ETL process, how to Transform data, how to create data models in Powe BI; Dax Functions, Data Modeling, and create a financial report.	
Session 1	**Power BI ETL Process / Transform Data**
	• ETL Process • Transform Data • Using Power Query Editor where we massage and scope the data
Session 2	**Dax Functions and Data Modeling**
	• Naming Column, Adding Columns headers, Editing data types • Working with the Applied Steps area. (Records every action taken) Adding, Merging, and reordering Columns. • Cleaning the data (replacing, upper/lower, rtrim, ltrim, Prefix, Suffix) • Data parsing • Conditional columns • Data modeling (joining data tables)
Week 11	**Data Visualization - Power BI ETL Process**
Learning Objectives: In this module, we will create charts and graphs, professional Power BI Reports	

Session 1	Build Data warehouse and ETL Process 1
	• Building Financial Reports using Excel as a Data Source • Adding Cards, Data tables, Cluster Bars, Pie, and donut charts • Adding Maps and tree maps.
Session 2	**Building Reports with Data source as data Warehouse**
	• Build Advance Report using SQL server database as a data source. • Adding Sliders (date and dropdown) • Adding Dax code to display the last refreshed report. • Work with Aggregates; Measures (Maxx, Avrageex, Countax) • Create Small Multiples
Week 12	**Information Security Management**

Learning Objectives: In this model, we will learn Information security management. We will learn how to define and manage controls that an organization needs to implement to ensure that it is sensibly protecting the confidentiality, availability, and integrity of assets from threats and vulnerabilities.

Session 1	Core Tenants, Security Documentation, Frameworks
	• Core Tenants • Security Documentations • Security Frameworks
Session 2	**Risk Assessment, Risk Mitigation, Types of Risk, Risk Handling and Security Controls**
	• Decision-making process • Risk Assessment | Risk Mitigation | Evaluation and Assessment • Risk Equation | Elements of Risk • Types of Risk • Risk Handling • Security Controls
Week 13-15	**Questions and Resume Preparation**

Learning Objectives: In this module, you will learn how to build an effective Data Science/Analytics resume:

- Structure of your Data Science Resume
- Adding Content and Information to your Data Science Resume
- Get Feedback from Industry Experts
- Build your Digital Presence

CERTIFIED & VERIFIED CERTIFICATE

Upon successful completion of the program, InnovatiCS grants a verified/certified digital certification of graduation to participants. This program is graded as pass or fail; participants must receive 80% to pass and obtain the certificate of graduation

After successful completion of the program, your verified digital certificate will be emailed to you in the name you used when registering for the program. All certificate images are for illustrative purposes only and may be subject to change at the discretion of InnovatiCS

Testimonials

Here is another reason why you should trust **INNOVATICS** with your training. Watch this recording capturing **INNOVATICS** prestigious Award from Internet 2.0 Conference - Dubai 2022

Raoul Elias Rivera • 1st — 2mo
CEO VIMBright | Invictus Alliance Group. Professor at Zigurat, Global Institute of T...

With the advent of ChatGPT, AI and Quantum technologies , the best investment is to get educated. I acknowledge Phd Mo Medwani - Ph.D. for his quest of sharing amazing data science programs!! We may be looking to expand such valuable programs to IberoAmerica sooner than later.

Love · 1 | Reply

Ahmed Dagnogo • 3rd+ — 3mo
Self

Attending this course was amazing. The instructor was all for our success and I learn so much. I definitely recommand this course to anyone interested in the Data Science, Machine Learning or AI field. The price is the lowest you can have on earth !!!
Thank you Innovatics for your dedication and professionalism.

Love · 3 | Reply

Saken Algiev • 1st
I'm the Project Management Professional with 20+ yrs of exp

Proud to be one of the first student from Kazakhstan кz on t
being updated based on the last developments in the field.

Special thanks to Mo Medwani - Ph.D. who patiently and cle
The program is open for everyone and proven record to be t

Love · 1 | Reply

Tahseen Mohammad • 1st — 3mo
Data & Analytics Professional (Azure Cloud, Data Science), MBA, PMP

Amazing data science program-- it is professional planned and executed, highly qualified and dedicated instructors and it covers almost all the current hot topics in data science. If you are seriously considering making a change for good, this is potentially the best training program in the market today.

Love · 1 | Reply

Mostafa ETTAYEB • 1st
Logistique et Transport (Start where you are, use what you ha

I had the pleasure of attending this training from zero to herc
of the training but the quality and mastery of this field by our
without forgetting Mr Edward Bujak.
invert on yourself and gain confidence to understand the scie
Science & AI.

Love · 1 | Reply

Uzma Jilani, MBA • 1st — 3mo
Data Strategy Leader | Data Engineering | Healthcare IT

Autif Kamal

Love · 2 | Reply

Zameer Shaik (He/Him) • 1st
Technical Consultant at Broadridge Financial Solutions Inc.

I have attended the previous batch and this program is terrif
instructors is unmatched in the industry. Course fees is unbe
And, you can repeat the program as many times till you are
insane!

Love · 4 | Reply

Javeed Ahmed (He/Him) • 1st — 2mo
Snr. Service Delivery Leader / Passionnate about Customer Satisfaction / Walk the ...

This is a fantastic program each time bringing in the latest things to learn. Another important thing is you can join the session any number of times till you are satisfied and also join the projects with the new team members.

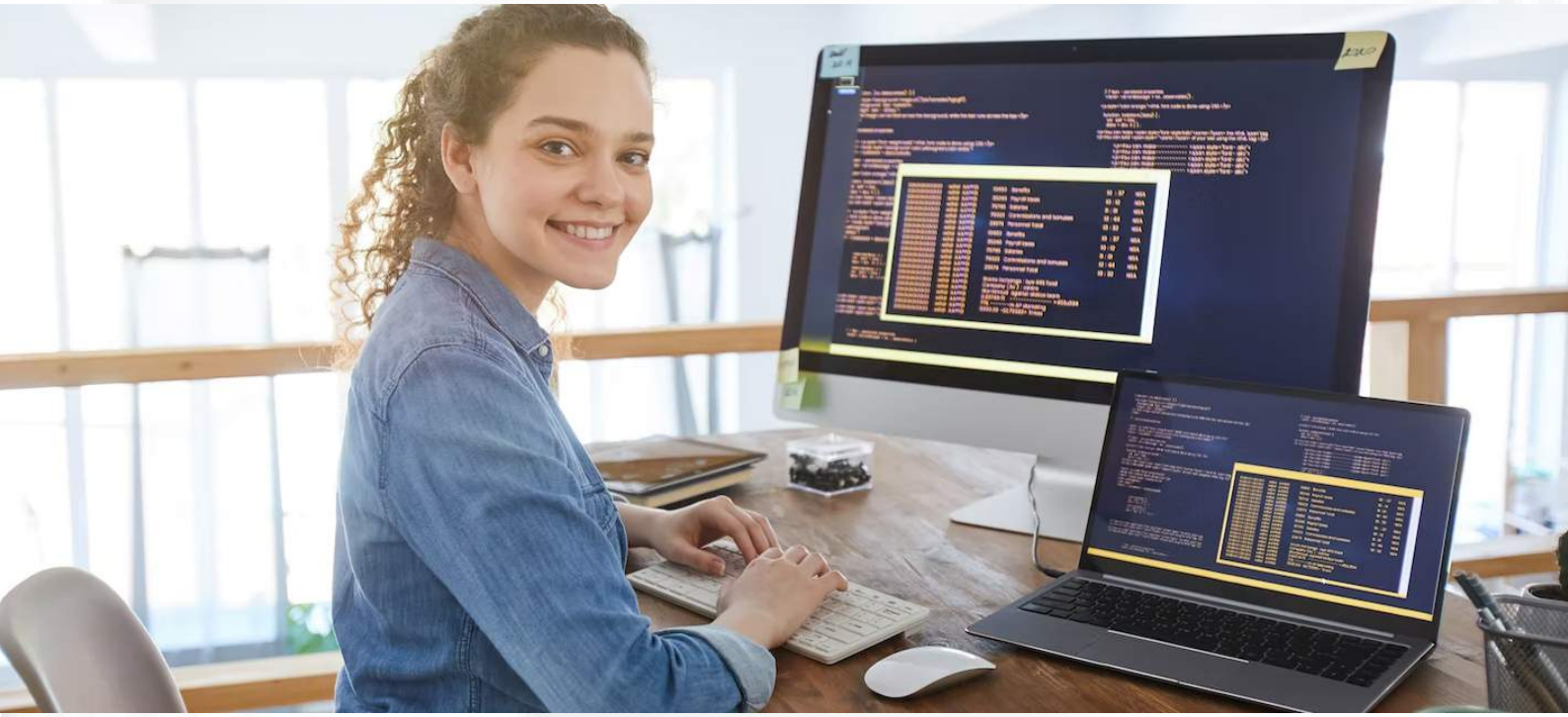
Love · 1 | Reply

About INNOVATICS

We are **INNOVATICS**, a holistic up-skilling platform driven by a unique, cohesive "Learn-Apply-Solve" framework. This innovative solution provides application-oriented immersive and interactive learning experience with extensive real-industry courses, cases, datasets and projects. It also ensures a blended pathway between industry and academia through simulation and context-ualisation.

INNOVATICS regularly presents at numerous conference workshops and until recently held regular monthly Meetups with industry experts as speakers.

We currently are a few multi-week, multi session courses that are live (then recorded) programs that participants have thoroughly enjoyed since we support our participants with almost endless one-on-one or group live support sessions.



DURATION
15 - Weeks
2 times a week

Tuesday & Friday
8:00 pm - 10: pm EST.

PROGRAM FEE
$899

Connect with a Program Advisor

Have questions about the program or how it fits in with your career goals?

SCHEDULE A CALL +1 (315) 975-1661