DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

I. Data Analytics 101 & Structured Query Language

Week 1 - Foundations of Data Analytics and Excel Proficiency

The first week of your Data Analytics program provides a comprehensive introduction to data analysis, data warehouse design, and data visualization principles, catering to both newcomers and those already in the field. The course emphasizes modular learning with modules addressing key questions of what, why, how, and where, allowing for flexible exploration. Simultaneously, you begin the Excel Essentials course, focusing on foundational Excel skills such as navigation, worksheet and cell management, formatting, and file saving, setting the stage for creating professional spreadsheets and preparing for Microsoft Office exams.

Week 2 - Introduction to SQL

Structured Query Language (SQL) is a special purpose language for interacting with relational databases. During this week, you will learn the basics of Structured Query Language. First, you will learn how to query data and shape results. Next, you will focus on creating and modifying data in your tables. Finally, you will touch on how to actually modify the tables themselves. By the end of this week, you'll understand the basics of how to create and use a relational database.

Week 3 - SQL for Data Engineers

The SQL for Data Engineers course will help you become a better data engineer. In this course, SQL for Data Engineers, you'll gain the ability to use advanced SQL techniques for collecting, managing, and transforming raw data into usable information for data scientists and business analysts. First, you'll explore advanced SQL techniques, including using window functions, common table expressions, advanced join types, and dynamic SQL. Next, you'll discover how to analyze and optimize SQL queries for performance by using execution plans and indexes, and using best practices for writing efficient, maintainable code and the roles played by query plan caching and cost-based optimization. Then, you'll learn how SQL can be used for data extraction, transformation, and loading into target systems and how data validation, cleanup, and aggregation can produce useful, conformant data. Finally, you'll learn about big data environments and emerging technologies such as data lakes and data meshes. When you're finished with this course, you'll have the skills and knowledge of SQL data engineering needed to find your place in this dynamic field.

digital nova scotia

DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

II. Python

Week 4 - Python Fundamentals

Python is a great programming language for beginners and experts alike because it's easy to learn and use and also has libraries that allow you to build pretty much anything. During this week, you'll learn to create Python applications to solve a wide variety of problems.

First, you'll explore data types, input, and output. Next, you'll discover lists, loops, and dictionaries. Finally, you'll learn how to incorporate what you've learned to read weather and space data from different web APIs. When you're finished with this course, you'll have the skills and knowledge of Python needed to build Python command-line applications.

Week 5 - Data Wrangling

In this course you'll learn about various functions and procedures that will help you get your data in order, providing a clean and well-constructed dataset for further data analysis and machine learning.

Week 6 - Data Visualisation

At the core of data science and data analytics is a thorough knowledge of data visualization. In this course, Introduction to Data Visualization with Python, you will learn how to use several essential data visualization techniques to answer real-world questions. First, you'll explore techniques including scatter plots. Next, you'll discover line charts and time series. Finally, you'll learn what to do when your data is too big. When you're finished with this course, you'll have a foundational knowledge of data visualization that will help you as you move forward to analyze your data.

Week 7 - Exploratory Data Analysis

Exploratory Data Analysis (EDA) is a set of techniques that help you to understand data, and every Data Analyst and Data Scientist should know it in depth. In this course, Exploratory Data Analysis with Python, you'll learn how to create and implement an EDA pipeline. You'll explore the available techniques, and learn why, when, and how to apply them. Finally, you'll discover how to communicate your findings to your audience. When you're finished with this course, you will have the skills and knowledge to face any complex EDA problem.

DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

Week 8 - EDA and Python for data analytics Lab.

Data scientists often deal with complex, multidimensional datasets that can be overwhelming even for experienced professionals. In this course, Exploratory Data Analysis with Complex Data Sets in Python, you'll gain the ability to uncover patterns, relationships, and insights from intricate datasets. First, you'll explore the foundational principles of Exploratory Data Analysis (EDA) and its significance in data science. Next, you'll discover effective techniques and strategies tailored for EDA in Python, ensuring you can easily navigate even the most complicated data sets. Finally, you'll learn how to craft precise research questions to guide your analytical explorations, setting the stage for robust and actionable insights. When you're finished with this course, you'll have the skills and knowledge of advanced EDA techniques needed to elevate your data science projects and deliver impactful results. During this week you'll also apply your skills in data wrangling, data visualization and EDA in a hands-on Python Lab.

Week 9 - Natural Language Processing

Text data is available in abundance on the Internet, whether it be reviews, tweets, surveys, web pages, or emails. Natural language processing is a powerful skill that helps you derive immense value from that data. During this week you'll first learn about using the Natural Language Toolkit to pre-process raw text. Next, you'll learn how to scrape websites for texting using Beautiful Soup, as well as how to auto-summarize text using machine learning. You'll wrap up the course by exploring how to classify text using machine learning. By the end of this course, you'll be able to confidently process raw text data and apply machine learning algorithms to it.

Week 10 - Assignment on SQL and Python

This assignment will be shared on the Learning Management System.

digital nova scotia

DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

III. Amazon Web Services Fundamentals

Week 11 - Cloud Fundamentals and Cloud Computing Essentials

Delve into the fundamentals of cloud computing, covering essential concepts, "as a service" models (PaaS, IaaS, FaaS, SaaS), server and "serverless" architectures, and various cloud job opportunities. The course emphasizes a beginner-friendly approach, requiring no prior prerequisites and encouraging a passion for cloud exploration. Practical labs and additional resources are provided to help students apply their knowledge and gain confidence in navigating cloud platforms.

Week 12 - Cloud Fundamentals and Core Services

Focus on essential cloud concepts and core services applicable to various cloud providers in today's digital landscape. The course covers fundamental cloud concepts, including cloud computing benefits, global infrastructure organization, cloud economics, and provider-specific tools and services. Additionally, it delves into understanding core services, including compute, networking, storage, databases, app integration, and management and governance, providing students with a solid foundation for navigating cloud environments, whether for certification preparation or broader cloud service comprehension.

Week 13 -Security and Architecture in the Cloud

This course focuses on fundamental cloud security and architectural principles applicable to various cloud platforms, offering valuable insights for AWS or similar cloud services. The curriculum covers core concepts like the Well-Architected Framework, shared responsibility models, and acceptable use policies, establishing a strong foundation for secure and scalable cloud solutions. Students will learn about security and user management on the cloud, key architectural concepts such as fault tolerance, high availability, and disaster recovery, and gain insights into building scalable and secure applications. Whether preparing for a certification exam or looking to implement cloud applications, this course provides essential knowledge and skills for success in the Cloud.

Week 14 - Assignment on Cloud Fundamentals

This assignment will be shared on the Learning Management System.

DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

IV. Introduction to Tableau

Week 15 - Preparing, exploring and analyzing data

Understanding when to use a live connection vs. an extract is foundational to creating a better experience when using Tableau Desktop. In this course, Tableau Desktop Specialist: Connecting to and Preparing Data, you'll gain the ability to create live connections, extracts, and a saved data source. First, you'll explore various connection types and learn how to connect to your data. Next, you'll discover how to add relationships to a data source. Finally, you'll learn how to manage data properties. When you're finished with this course, you'll have the skills and knowledge of working with different data connections needed to analyze data within Tableau Desktop.

Analysts are often tasked with finding critical insights from a data source. In this course, Tableau Desktop Specialist: Exploring and Analyzing Data, you'll gain the ability to find insights quickly by learning how to create basic charts. First, you'll explore building basic charts. Next, you'll discover how to organize data and apply filters. Finally, you'll learn how to apply analytics to a worksheet. When you're finished with this course, you'll have the skills and knowledge of creating charts and applying analytics needed to perform meaningful analysis in Tableau Desktop.

Week 16 - Sharing insights and understanding Tableau concepts

Too many elements on a data visualization can be distracting. In this course, Tableau Desktop Specialist: Sharing Insights, you'll learn how you can enhance the look and feel of your data visualizations by changing Tableau defaults. First, you'll explore how you can reduce cognitive load to declutter your dashboard. Next, you'll discover how to build a dashboard for multiple devices. Finally, you'll learn how to add interactivity for your users to find answers to their own questions. When you're finished with this course, you'll have the skills and knowledge of creating, modifying and formatting dashboards needed to effectively communicate with data.

DATA ANALYST

SKILLS FOR HIRE | ELEVEZ VOS COMPÉTENCES
Atlantique

Week 16 - Sharing insights and understanding Tableau concepts con't

In order to seek insights from the data, it needs to be summarized. In this course, Tableau Desktop Specialist: Understanding Tableau Concepts, you'll gain the ability to differentiate between discrete and continuous fields and learn how to use different types of aggregations for dimensions and measures. First, you'll explore how Tableau organizes data into dimensions and measures. Next, you'll discover the difference between dimensions and measures. Finally, you'll learn how to aggregate dimensions and measures. When you're finished with this course, you'll have the skills and knowledge of data organization and discrete vs. continuous fields needed to understand what Tableau will draw as you drag and drop

digital nova scotia