



Web and Mobile Design Series

Data Analyst

Data Analyst is the seventh course in the CIW Web And Mobile Design series. This course teaches how to use data to analyze all aspects of a company's operation and make appropriate business decisions. It focuses on Web-oriented data, and methods for analyzing data in order to create appropriate dashboards, reports and solutions.

This course teaches students how to identify typical sources of institutional knowledge, including Customer Relationship Management (CRM) applications, inventory management systems, transaction data, social media, marketing sources, industry systems. Students will compare and contrast structured and unstructured data in order to summarize how data can drive business decisions. The course also covers specific tactics for working with cloud-based data, including cloud-native data, migrating data to or from the cloud, backup procedures, security issues, and user training.

Students will learn ways to determine relationships between organizational efforts and business outcomes, extrapolate information using data obtained from new and traditional data sources, and ways to analyze and represent data. Students will also learn how ethics and security are vital parts of a Data Analyst's responsibilities. The Data Analyst can compile the data from many sources, prepare and deliver an objective and unbiased presentation.

Topics

Fundamentals of Data Analysis

- Pre-Assessment Questions
- The Importance of Good Data
- Centralized Data Benefits
- Structured vs. Unstructured Data
- Forgetting Steve Jobs
- Typical Sources of Business Data
- Search Engine Optimization
- Business Decisions in the Non-profit Industry

Introduction to Big Data

- Big Data
- The Importance of IT Data Management
- IT Business Environments
- Cloud-Based Data
- Cloud-Native Data
- In-House Data
- When to Migrate In-House Data to the Cloud
- Variations of Cloud-Based Systems
- Typical Databases Used for Data Analysis
- Data-driven Business Decisions
- The Internet is Worthless

Working with Data Sources

- Data E-Harmony: Working with Different Departments to Bring Data Together
- The Purpose of Customer Relationship Management (CRM)
- CRM Integration: A Banking Scenario
- Obtaining Data from E-Mail and User Forums
- Obtaining Data from Other Knowledge Bases
- Obtaining Data from CRM and Business-To-Business Frameworks
- Transaction, Payment and Inventory Data
- Using Multiple Data Sources
- InStyle Publishing

Tools for Capturing and Analyzing Data

- Capturing Data: Tableau Public
- Capturing Data: Google Fusion Tables

- Capturing Data: OpenRefine
- Overview: Hadoop-Based Environments
- Capturing and Analyzing Data in Hadoop
- The R Project
- Additional Software for Data Capture
- Playing With Big Data

Analyzing and Reporting Data

- Network Traffic
- Organizational Efforts and Business Outcomes
- Best Methods to Capture and Report Specific Data
- Data Analysis and Reporting Dashboards
- Create Reports and Charts
- Create a Presentation for Reporting Data
- Frequently Asked Questions for Presentations
- Better Business Through Data

Target Audience

Individuals preparing to enter or continue in the workforce fields of Web site development and design can benefit from the CIW Data Analyst course and/or certification:

- High school students
- College students
- Technical/trade school students

Professionals working in marketing, merchandising, and data-driven fields for any industry can benefit from the CIW Data Analyst course and/or certification:

- Data Analysis professionals
- Product Development professionals
- Merchandising professionals
- Web marketing professionals
- Advertising professionals
- Entrepreneurs

Job Responsibilities

Data Analyst job responsibilities can include:

- Use data to analyze all aspects of a company's operation and create appropriate dashboards, reports and solutions.
- Work with typical databases, including Customer Relationship Management (CRM) applications, inventory management systems, transaction data, social media, marketing sources and industry systems.
- Work with cloud-based data, including cloud-native data, migrating data to or from the cloud, backup procedures, security issues, and user training.
- Determine relationships between organizational efforts and business outcomes, extrapolate information using data obtained from new and traditional data sources.
- Use ethics and security to present data to avoid personal or organizational bias.

Prerequisites

The CIW Data Analyst courseware requires an understanding of spreadsheets, databases, business processes, web sites and coding. Suggested prerequisites are the *CIW Internet Business Associate*, *CIW Site Development Associate*, *CIW Advanced HTML5 & CSS3 Specialist* course, and *CIW User Interface Designer*, or equivalent knowledge.