

Data Analytics (Spring 2024)

Instructor

Carolina Softech
Timothy Stephen

Delivery

Hybrid – Participants must attend in-person AND online dates.

Program Dates

March 18 – June 28, 2024

Mondays & Thursdays

In person from 6:30 – 8:30 p.m.

Tuesdays & Wednesdays

Online from 6:30 – 9 p.m.

Program Duration

14 Weeks

PROGRAM OVERVIEW

Data Analytics is a process of inspecting, cleaning, transforming and modeling data to discover useful information and support decision making to achieve business goals.

There are various data analysis qualitative and quantitative methods; and analytical or statistical tools used to extract useful information and translate them into insights to make better business decisions, most of which are covered in this program.

PREREQUISITES

Professionalism is particularly important in this field, and therefore in this program. Class attendance, punctuality, civility, ability to have a good relationship with others, cooperation, collaboration, creativity, attention to details, resourcefulness and meeting deadlines are all critical elements of success.

To successfully complete Goodwill's Data Analytics training program, you must have:

- 1 year of Information Technology work experience
- Advanced-level education in any discipline / field (examples include a college degree, certification, etc.)
- Strong interpersonal skills, such as effective communication skills, flexibility and adaptability.
- Advanced-level knowledge and application of Microsoft Excel
- Critical thinking / analytical reasoning skills

PROGRAM SUMMARY

Essential Skills / Customer Service Curriculum will be imbedded throughout the program. Topics will include customer service, growth and mindset, teamwork, conflict resolution, professional assertiveness and etiquette, and many more!

Module 1 - Introduction to Data Analytics

The Data Analytics program will give you insights into how to apply data and analytics principles in your business. Learning analytics, data visualization

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and data science methodologies through this program will make you capable of driving better business decisions and ROI (return on investment).

Module 2 - Data Analytics with Excel

The program includes Microsoft® Excel skills and includes training on Power BI. These are two commonly used tools.

Module 3 - Programming Basics and Data Analytics with Python

Learn how to perform data analytics with Python using multi-dimensional arrays in NumPy, manipulate Data Frames in pandas.

This Data Analytics program will take you from the basics of Python to exploring many different types of data. You will learn how to prepare data for analysis, perform simple statistical analyses, create meaningful data visualizations, predict future trends from data, and more.

Module 4 - Power BI

Power BI is a data visualization, reporting and business intelligence tool utilized world-wide. This program trains you to use the tool effectively for preparing data, creating interactive dashboards, adding different dimensions and drilling into outliers.

Module 5

Introduction to SQL

Working with Queries (DDL, DML, DQL)

Aggregate Functions

Joins and Set Operations

Implementation of Data integrity

Working with Constraints

Implementing Views

Working with Indexes

Working with Stored Procedures and Functions

Projects Include:

- Web Scraping Projects to extract data from websites
- Exploratory Data Analysis Projects
- Data Visualization Project

Languages	SQL
Languages	Python
Tools	Power BI, Excel

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Concepts	Data reprocessing
Concepts	Data Modeling
Concepts	Data sets
Concepts	Statistics - Basics
Concepts	Deployment
Concepts	BA Concepts

PROGRAM OUTCOMES

- The program provides the complete preparation you need to become a data analyst
- Acquire a big picture understanding of the data analytics role
- Learn beginner skills of Python
- NumPy and pandas basics
- Be able to work with text files
- Understand different data types and their memory usage
- Learn Data Visualization
- Engage with coding exercises

PROGRAM SCHEDULE

PROGRAM SCHEDULE		
Week	Days	Format
Week 1 - 14	Mondays & Thursdays	In person - 6:30 - 8:30 pm
Week 1 - 14	Tuesday & Wednesdays	Online - 6:30 - 9 pm
Workshops		
Note: Dates on workshops are to be determined during the program. An updated syllabus will be provided to those selected for the program.		
<u>Week</u>	<u>Subject</u>	
Saturday Workshops during weeks 7 & 8 (8:30am –1pm)	Agile Workshop (In Person)	
*Wednesday	SDLC Workshop (Online)	
*A more detailed schedule for Wednesdays nights will be provided to those selected for the program. Some Wednesdays will be self-directed labs. Others will be scheduled trainings facilitated by Goodwill teams. These will include essential skills, resume preparation, mock interviewing, and career path exploration.		

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REQUIRED MATERIAL

Chrome Books and Mac Books do not meet the standard technology requirements needed for these programs. You will need to have your own Windows based laptop and a working internet connection. We do not provide computers / laptops for this program.

We will be using various software programs throughout this program. Most of the downloads are for Windows based machines only and **will NOT** work with Apple/MAC systems, Chrome books or tablets.

- 250 GB hard drive or higher
- 4 GB RAM or higher
- 2.0 GHz Intel or AMD processor
- Windows 10
- Microsoft Excel Access (Desktop or Microsoft 365)
- Internet Explorer or Safari 11 or later
- Anti-virus program (updated regularly)
- Computer microphone and speakers to participate during class
- Web Camera to be visible during class
- High-speed Wi-Fi connection obtained either at home or in a quiet study setting)

PROGRAM INSTRUCTOR

Timothy Stephen is an IT (Information Technology) professional with over 15 years of experience. He has held roles in software testing, next gen technologies, and the adoption of digital technologies throughout the retail, banking, oil and natural gas, and healthcare industries. He is currently an Associate Director for an IT services company. Timothy is married and has three daughters. In his spare time, he enjoys playing and composing music. He has a heart for community and loves people.

Additional Information: This is an interactive program. Students will learn from instructor and guest lecturers, hands-on activities, individual and group assignments, presentations, etc.

****This syllabus is a highlight of the program details and is subject to change.***