R is a statistical programming language and is a powerful tool for data processing and manipulation. This module will start with an introduction to R and RStudio. You will learn about the different R visualization packages and how to create visual charts using the plot function. In addition, Distributed Version Control Systems (DVCS) have become critical tools in software development and key enablers for social and collaborative coding. While there are many distributed versioning systems, Git is amongst the most popular ones. Further in the module, you will develop the essential conceptual and hands-on skills to work with Git and GitHub. You will start with an overview of Git and GitHub, followed by creation of a GitHub account and a project repository, adding files to it, and committing your changes using the web interface. Next, you will become familiar with Git workflows involving branches and pull requests (PRs) and merges. You will also complete a project at the end to apply and demonstrate your newly acquired skills.

**Learning Objectives**

* Describe R capabilities and RStudio environment.
* Use the inbuilt R plot function.
* Explain version control and describe the Git and GitHub environment.
* Describe the purpose of source repositories and explain how GitHub satisfies the needs of a source repository.
* Explain how to sign up for a GitHub account and describe how to create a repository.
* Demonstrate how to edit and upload files in GitHub.
* Explain the purpose of branches and describe how to merge changes into branches.