Real Time College

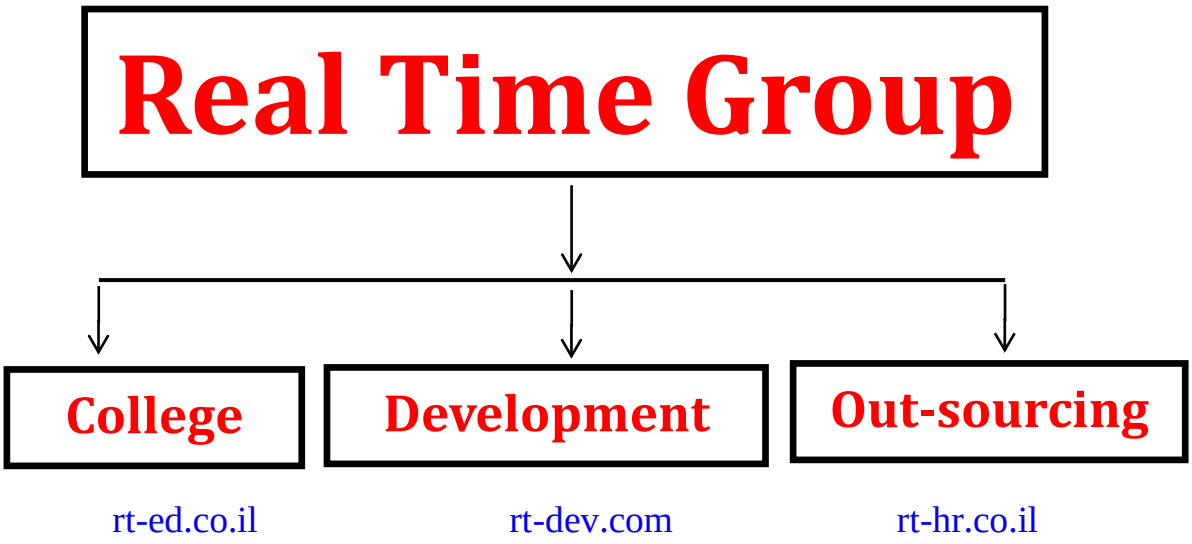
Course: Scientific Python

Duration: 35 Hours

Real Time Group is a multi-disciplinary dynamic and innovative Software Solutions Center, established in 2007.

Providing Software solutions, professional services and consulting, end-to-end flexible system infrastructure, outsourcing, integration and training services for Hardware, Software and RT-OS \ Embedded Systems.

The company is divided into the following three Divisions:



Training Division:

Professional Training Services for Hardware, Software, RT-OS and Embedded systems industries.

We provide the knowledge and experience needed to enable professional engineers to Develop, Integrate, Software and ML based Projects.

In order to ensure experience, all courses are practical – hands-on-training.
The latest Development, QA and Automation equipment which are adopted by the industry are used.

All students are supplied with Development-Boards for home-work and course projects.

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Course Overview:

This is a Hands-on course for Scientific Python, throughout will introduce you to the field of data science.
First, and foremost, you'll learn how to conduct data and analyze it. Including how to import data, explore it, learn from it, visualize it, and ultimately generate easily shareable reports.

We'll also introduce you to two powerful areas of data analysis: machine learning and natural language processing.
To conduct data analysis, you'll learn a collection of powerful, open-source, tools including: working with python, jupyter notebooks, pandas, numpy and matplotlib.

Who should attend:

- Suitable for anyone who needs to quickly speed up with developing ML\AI applications.

Prerequisite:

- This course is intended for learners who have a basic knowledge of programming in python.

Scientific Python: Course content

1. **Numpy:**
   a. Introduction to Numpy
   b. Numpy Arrays
   c. Numpy Array Indexing
   d. Numpy Operations

2. **Pandas:**
   a. Introduction to Pandas
   b. Series
   c. DataFrames
   d. Missing Data
   e. Groupby
   f. Merging Joining and Concatenating
   g. Operations
   h. Data Input and Output
   i. Pandas Built-in Data Visualization

3. **Matplotlib**
   a. Introduction to Matplotlib
   b. Installing Matplotlib library in python
   c. Using Matplotlib - examples

4. **Seaborn:**
   a. Introduction to Seaborn
   b. Plots
   c. Categorical Plots
   d. Matrix Plots
   e. Grids
   f. Regression Plots
   g. Style and Color

5. **Plotly and Cufflinks**
   a. Introduction
   b. Plotting graphs using Python's plotly and cufflinks module
   c. Installing Plotly and Cufflinks libraries in python