TITLE: **Modelling, Clustering and Forecasting Post Trade data**

DESCRIPTION

Borsa Italiana owns Monte Titoli, the central depository for the Italian financial market and one of the main ones in Europe. Monte Titoli offers settlement and custody services on Italian and foreign securities on over 40,000 financial instruments including bonds, government securities, debt securities, ETFs and certificates. Monte Titoli provides its customers a highly efficient and fully automated operations and daily elaborate big data using analytics and machine learning.

This lab will give you an overview on all the techniques we currently use to manage Post Trade data and time series (i.e. Settlement efficiency over years, overnight cash flow in DCA). This data can be very challenging in analysis and modelling.

DURATION

20 H (5 slots of 4 hours)

CALENDAR

h. 14,30 – 18,30

- Wednesday Feb. 3 2021
- Wednesday Feb. 10 2021
- Wednesday Feb. 17 2021
- Wednesday Feb. 24 2021
- Wednesday March 3 2021

MAIN CONTENTS

During the lab, students will learn

- *how retrieve financial data from public or private data sources and organize them in cloud*
- *how to extract and model financial series*
- *how to partition time series data into groups based on similarity or distance*
- *how to create machine learning or deep learning models to forecast next day's data*
- *how to build ML production pipeline in cloud*

The lab will require the production and the presentation of a working notebook that implements one of the techniques learned during the workshop.

ELIGIBLE STUDENTS

5 students

Preferred Skills:

- Basic knowledge of SQL and Relational DB
- Basic knowledge of R/Python
- Basic usage of Jupyter Notebooks
- Interest in Financial topics

Email for sending applications: dse@unimi.it

Application deadline: 10 January 2020