Assignments

1. Optimize the log-periodic power law (LPPL) parameters using GREY WOLF optimizer for predicting stock price crisis. 15 Marks
2. Optimize the log-periodic power law (LPPL) parameters using TABU Search optimizer for predicting stock price crisis. 15 Marks
3. Optimize the log-periodic power law (LPPL) parameters Differential Evolution (DE) for predicting stock price crisis. 15 Marks
4. Optimize the log-periodic power law (LPPL) parameters Evolutionary Programming (EP) for predicting stock price crisis. 15 Marks
5. How COVID 19 pandemic impact on stock prices and find out correlation between COVID 19 and stock price and develop machine learning or statistical model for predict the same. 10 Marks
6. How crude oil crisis impact on stock index and find out correlation between crude oil and stock index and develop machine learning or statistical model for predict the same. 10 Marks

Ref link: https://www.sciencedirect.com/science/article/abs/pii/S0965997813001853.
Note: Use Indian stock data from NSE (National stock exchange, India)

https://github.com/fanannan/LPPL LPPL python implementation.
https://github.com/fanannan/LPPL

Instructions for final submission of assignment.

1. All assignments should contain code along with the explanation of the code. The code will be evaluated in the evaluators' desktop so please mention the dependency in running the code.
2. Stock Data must be taken from NSE. Crude oil prices from the reliable sources. The data used for each of these assignments must be mentioned at the beginning of the report of the assignment.
3. Each assignment has three parts and should be in separate folder, so each submission has six folders.
    a. Report (Detail explanation and detailed analysis)
    b. Data used
    c. Code along with the explanation
4. If you have any issue in downloading data, please feel free to contact Mr. Nagaraj Naik (Teaching Assistant) of this course.
5. All assignments are not mandatory, but grading is comparative. If you find any assignment tough leave that and do next.
6. All submissions should be made on or before 15th June 2020
7. The folder to upload your assignments will be given later. Soon you will be informed through WhatsApp.

8. If you wish not to submit the assignments you will not be graded for this course. In such cases, you will be given similar exercises on you return to the Institute.

9. **Flow graph of the individual submissions should be different. If two flow graphs found same, both submission will be discarded without further notice.**

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