Assessment Task 1 - Assignments (Individual)

Description

Worried about the persistence of high interest rates, your company is exploring possible new investment strategy focused on investing in companies with high degrees of “financial health” as measured by their ability to service their debt. Your task is to assess the feasibility of such a strategy.

Objectives

Your report will have the following components:

Statistical analysis of the predictive power (based on the Information Coefficient Analysis) of the three ratios, as well as of a synthetic factor calculated as the average of the three.

A presentation of the results of backtesting of an investment strategy based on the “average” synthetic factor over the 2007–2023 period.

Optimization of this strategy based on the number of shares over/underweighted and the rebalancing frequency.

Address some of the concerns of the CIO of your company [Black Belt].

Exploration of a Machine Learning approach to this strategy.

The deliverables for this assignment are:

A Jupyter Notebook with your code;

A PDF file with a short written report.

Length

There is no formal length requirement for the report. My suggestion is to aim at anywhere between 8-10 pages of “main text” including tables and pictures. You may also add an appendix if you want to add more tables, etc. Please be sure that all the necessary information is in the main body of the report.