Data Science Challenge

Download these two .csv files:

[trends1.csv](https://drive.google.com/file/d/1tjd-2NvPDXFPxIdYJ-eTlmQeEMajUlLf/view?usp=sharing)

[predictions.csv](https://drive.google.com/file/d/1AsWhIHbBpajXGb2td5mEVnMtgJtFhPVB/view?usp=sharing)

These files have information for 3 types of tops.

trends1.csv consists of time series data of scores representing the popularity of each top.

predictions.csv has data of model fits that have then been extrapolated to the next 365 days.

Please complete the following tasks:

**PART 1**

1. Assess the three trends in trends1.csv. State which is performing best and elaborate how you have defined "best performance".
2. Create a Python class that has the following methods:
   1. *last\_12m*: calculates the performance of the input ‘top’ for the last 12 months.
   2. *perf\_12m*: Outputs a dictionary in the format given by the eg:

* {top1: Top 1’s performance for the last 12 months is -3.25%}

1. Instantiate the above class and output the following for each top:
   1. last\_12m()
   2. perf\_12m()

**PART 2**

1. Look at the predictions.csv file - there are three fits for each trend, comment on which you find to be best.
2. Quantify these predictions into an assessment of how you would expect the demand to change over the next 3, 6, 12 months.
3. Please create your own prediction model based on the three types of tops.
4. Briefly explain your choice of model, and how it performs better or worse than the provided predictions.

Please use Python to complete this challenge. Host the submission in a GitHub repository and share the link.

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