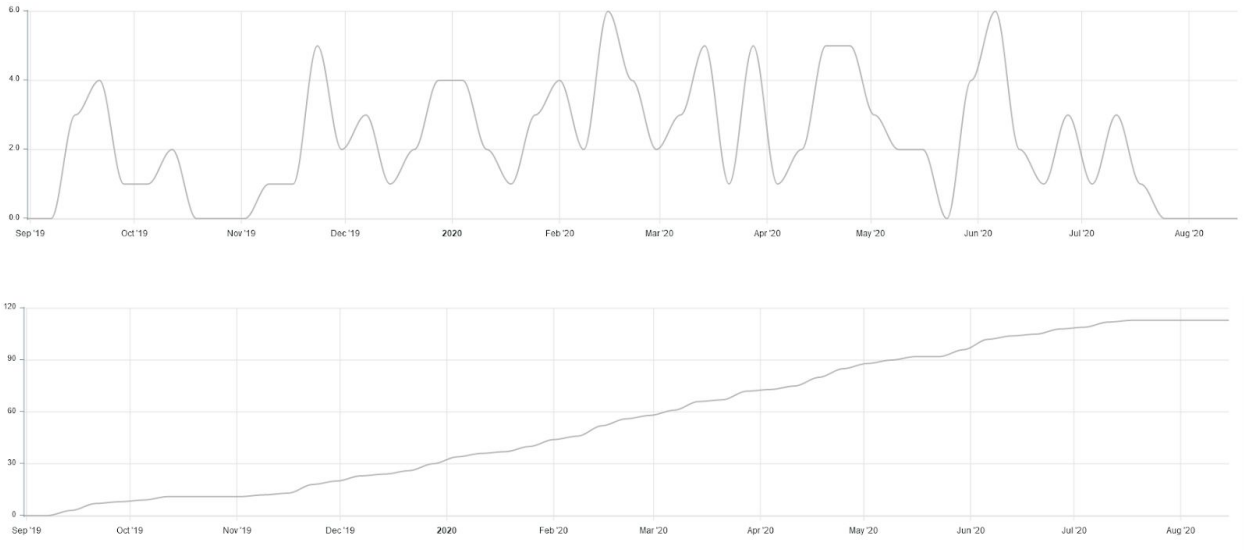
Simporter Test Task (Junior PyDev)

Let's suppose we have a number of events that are distributed in time. Each event has several attributes. And we have a service (webpage) which purpose is to visualize this distribution (i.e. show a timeline) using different filters. Visualisation can be shown in either cumulative or usual way (see below).



Your task is to create an API providing data for visualization.

Details

Source data is csv file containing following data:

- Event id (column ***id***)
- Event timestamp (column ***timestamp***)
- Several event attributes (columns ***asin, brand, etc***)

Link: https://1drv.ms/u/s!AvTeEdxQwFAJqliTn-n6Yxk353vF?e=llePiD

You are expected to create two API methods:

GET /api/info
Example:
`http://localhost:5000/api/info`
This method doesn't require any parameters

Returns: Information about possible filtering (list of attributes and list of values for each attribute)

GET /api/timeline
Example:
`http://localhost:5000/api/timeline?startDate=2019-01-01&endDate=2020-01-01&Type=cumulative&Grouping=weekly&attr1=value1&attr2=value2`

Parameters:

- startDate
- endDate
- Type (cumulative or usual)
- Grouping (weekly, bi-weekly or monthly)
- Filters (attributes and values)

Grouping types:

You need to aggregate data **during the period** (from startDate to endDate):

- weekly (data for each week)
- bi - weekly (data for each 2 weeks)
- monthly (data for each month)

Returns: JSON with timeline information according to input parameters:

- Each point on the graph will be in a format:
    - data type - dict:
        - keys data type - str
        - values data type - int (number of events during this period)
- The response should have “timeline”(str) as a key, value - list of dicts with timeline data.
- Example of response:
  `{“timeline”: [{“date”: “2019-01-01”, value: 10}, … ] }`

Technical requirements

- Python 3.7+
- Flask
- Other details are up to you

Good luck and have fun.