עמותת תפוח
Appleseeds
جمعية التفاح

asteroid danger index

Topics:

- http
- data "massaging"
- api usage
- I/O
- matplotlib/numpy

Task description:

- using nasa api, we will show asteroids data and rank it according to its danger to humanity.
- get an api key (here) for nasa api and save it into a file.
- load this key into your python file, and use it.
- use nasa's Asteroids - NeoWs api (here). you need to provide a 7 days span max.
- save the results in a file.
- process the results - save only:
  - id
  - name
  - est diameter (min and max),
  - miss distance (km),
  - relative velocity (KM/H).
- create graphs for each asteroid showing the following relations in a graph:
  - min diameter/velocity
  - miss distance/max diameter
- calculate the danger index of each asteroid like so:
  - A*(avg diameter) + B*(relative speed) * 1/C (miss distance)

where A,B,C are natural numbers. make the 1 by default, but give the user the ability to dynamically set them.
    - plot asteroid name/danger index.
    - make sure that the plots update when you change the A,B,C coefficients.

EXTRA:

- create a small data set with a full month's data. think if you can or should run http requests in parallel.
- add more statistical analytics.