System test case - #6

Test case details

Test reproducer: Joonas Pelttari

Date: 07.04.24, 17.04.24

Device:

Desktop Computer, fast modern processor, Windows 10 Home Version 10.0.19045 Build 19045

Environment details:

- Most recent master branch of the project GitHub as of 17.04.
- Commit 388f60274455eaa56cf618a759927bb49b60fa67
- Python venv used with development
- Python and imports:
    - Python 3.12.1
    - numpy 1.26.3
    - pandas 2.1.4
    - us 3.1.1

Test details

Test is a system test, running the whole model with specific parameters. In this test we run the same parameter sets but for both JHU and NYTimes datasets and compare the results. Even though the datasets are different, the data using the same parameters should be somewhat similar. Meaning the results for the validation and predictions should also be similar with some possible error margin. No deep statistical analysis is done in this system test, but the results received are compared to “make sense” between the two different datasets. i.e. Investigating if the corresponding values are close to each other and no big anomalies are found.

I am using state level in this test and have chosen two different states for this test Alabama and Georgia, that are used with different end dates.

Test steps

Run 1:

1. Run validation.py with the following parameters:

   *--END_DATE 2021-07-07 --VAL_END_DATE 2021-07-14 --dataset **JHU** --level state --state Alabama*

2. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-07-07 --VAL_END_DATE 2021-07-14 --dataset **JHU** --level state --state Alabama*

3. Run validation.py with the following parameters:

   *--END_DATE 2021-07-07 --VAL_END_DATE 2021-07-14 --dataset **NYTimes** --level state --state Alabama*

4. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-07-07 --VAL_END_DATE 2021-07-14 --dataset **NYTimes** --level state --state Alabama*

Run 2:

1. Run validation.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **JHU** --level state --state Alabama*

2. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **JHU** --level state --state Alabama*

3. Run validation.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **NYTimes** --level state --state Alabama*

4. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **NYTimes** --level state --state Alabama*

Run 3:

1. Run validation.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **JHU** --level state --state Georgia*

2. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **JHU** --level state --state Georgia*

3. Run validation.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **NYTimes** --level state --state Georgia*

4. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-08-08 --VAL_END_DATE 2021-08-15 --dataset **NYTimes** --level state --state Georgia*

Run 4:

1. Run validation.py with the following parameters:

   *--END_DATE 2021-11-11 --VAL_END_DATE 2021-11-25 --dataset **JHU** --level state --state Georgia*

2. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-11-11 --VAL_END_DATE 2021-11-25 --dataset **JHU** --level state --state Georgia*

3. Run validation.py with the following parameters:

   *--END_DATE 2021-11-11 --VAL_END_DATE 2021-11-25 --dataset **NYTimes** --level state --state Georgia*

4. Run generate_predictions.py with the following parameters:

   *--END_DATE 2021-11-11 --VAL_END_DATE 2021-11-25 --dataset **NYTimes** --level state --state Georgia*

Test results

Test results (available in the RunX) folders are producing same results for the chosen testing parameters and states, and no anomalies can be found meaning the test can be mark successful. This test could of course be expanded by automating the steps and running automatic comparison which would allow every state to be investigated, but with manual work used in this test case, it is too tedious.