

# System test case - #1

## Test case details

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Device: Desktop Computer, fast modern processor, Windows 11 Home v.23H2

Environment details:

- Most recent master branch of the project github
- most recent commit is  
c72169bb6764e2ddba202fc4f6486a08fd74cae9
- Anaconda virtual environment used with development
- Python and used 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. For this test case we use the same parameters as the only example in the base code of the project provided to the group by UCLA.

Parameters:

- Dataset: NYtimes
- END\_DATE: 2021-07-07
- VAL\_END\_DATE: 2021-07-14
- level: state

## Test steps and results:

1. Run validation.py with the following arguments:

`validation.py --END_DATE 2021-07-07 --VAL_END_DATE 2021-07-14 --dataset NYTIMES --level state`

- a. Result: Program crash due to exception after running for about 4min 45 sec. Validation was apparently completed successfully for states Washington, Illinois, California, Arizona. Then it started for Massachusetts, but crashed within function `generate_parameters()` of `validation.py`. This appears to be due to a faulty variable. Image of crash below

Image:

```
> validation.py > generate_parameters
188 def generate_parameters(region, param_dict):
189     if nation=="US":
190         resurge_start_date = "2020-09-15"
191         train_data = [data.get(start_date, second_start_date, nation), data.get(second_start_date, resurge_start_date, nation), data.get(resurge_start_date, args.END_DATE, nation)]
192         full_data = [data.get(start_date, second_start_date, nation), data.get(second_start_date, resurge_start_date, nation), data.get(resurge_start_date, args.END_DATE, nation)]
193         val_data = data.get(args.END_DATE, args.VAL_END_DATE, nation)
194         a, decay = FR_nation[nation]
195
196     return {'a': a, 'decay': decay, 'pop_in': pop_in, 'Pop': Pop, 'state': state,
197           'train_data': train_data, 'reopen_flag': reopen_flag, 'full_data': full_data,
198           'val_data': val_data, 'start_date': start_date, 'second_start_date': second_start_date, 'nation': nation}
199
200 def generate_validation_results(parameters, params_allregion, region):
201     """ The function fills the params_allregion dictionary with validation results per region.
202     @param parameters A dictionary that contains needed parameters. Result of refactoring.
203     @param params_allregion A dictionary that will contain all the validation results from all the wanted regions after modification
204
205 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
3.53618774e-02]
[1.45574340e+06 9.70495600e+03 2.59022781e-06 9.23057075e+05
1.82886189e+04 4.86857143e+02 8.56211669e-03 4.09008170e-03
3.51812367e-02]
[1.45574340e+06 7.27871708e+03 2.45728795e-06 9.25282618e+05
1.02956308e+04 4.86857143e+02 1.60926398e-02 3.79171368e-03
3.59062259e-02]
[1.45574340e+06 3.63935850e+03 1.00000000e+06 9.22005382e+05
1.82676838e+04 4.86857143e+02 1.08419529e-02 3.95862698e-03
3.45982638e-02]]
Best Val loss: 1.857441877461471e-06 Last CC: 940057.3775012341 Last FC: 18380.97144591366 Max inc Confirm: 557.3545853091637
Massachusetts
Failed to enable GUI event loop integration for 'qt'
Traceback (most recent call last):
File "c:\Users\teetus\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\_vendored\pydevd\pydev_ipython\matplotlibtools.py", line 30, in do_enable_gui
enable_gui(gui_name)
File "c:\Users\teetus\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\_vendored\pydevd\pydev_ipython\inputhook.py", line 540, in enable_gui
return gui_hook(app)
*****
Exception has occurred: UnboundLocalError X
cannot access local variable 'full_data' where it is not associated with a value
File "C:\Users\teetus\SMENGPRO\Epidemic-model-of-COVID\code\validation.py", line 297, in generate_parameters
'train_data': train_data, 'reopen_flag': reopen_flag, 'full_data': full_data,
*****
File "C:\Users\teetus\SMENGPRO\Epidemic-model-of-COVID\code\validation.py", line 466, in generate_validation_files
parameters = generate_parameters(region, region_list_dict)
File "C:\Users\teetus\SMENGPRO\Epidemic-model-of-COVID\code\validation.py", line 484, in <module>
generate_validation_files()
UnboundLocalError: cannot access local variable 'full_data' where it is not associated with a value
298
299
300 def generate_validation_results(parameters, params_allregion, region):
301     """ The function fills the params_allregion dictionary with validation results per region.
302     @param parameters A dictionary that contains needed parameters. Result of refactoring.
303     @param params_allregion A dictionary that will contain all the validation results from all the wanted regions after modification
304
305
```

2. Test case aborted due to crash