COVID-EENet

COVID-EENet: Predicting Fine-Grained Impact of COVID-19 on Local Economies

About

- Source code and datasets of the paper COVID-EENet: Predicting Fine-Grained Impact of COVID-19 onLocal Economies, AAAI 2022.
- Since **dataset from BCCard is not open to public**, we only provide epidemic-view feature and the physical distance dataset of geography-view feature.

Installation

Requirements

- Ubuntu 16.04.7 LTS
- python 3.8 (Recommend Anaconda)
- Pytorch >= 1.9.0

Usage

- Run `python main.py` to train COVID-EENet

```
python main.py -h
usage: main.py [-h] [--model_name MODEL_NAME] [--fname FNAME]
[--pred_len PRED_LEN] [--cuda CUDA] [--train]
[--test] [--save_prediction] [--save_metric_result]
COVIDEENet
optional arguments:
  -h, --help                show this help message and exit
  --model_name MODEL_NAME   type one of the comparing algorithms including
  --fname FNAME             type the file name of the parameters, predicti
  --pred_len PRED_LEN       type the predicting length of algorithms
  --cuda CUDA               type the number of gpu
  --train                   type when you train the model
  --test                    type when you validate the model
```

```
  --save_prediction           type when you save the predictions of the algo
  --save_metric_result        type when you save the experiment results of t
```

After training the model, you can find

- the learned parameters in directory `models_state_dict`
- the predictions in directory `model_prediction`
- the experiment results in directory `RMSE_district_buz_pairs`

Hyperparameters

Please check the hyperparameters of COVID-EENet defined in Config.py and supplementary material.