

MECATS: A Mixture-of-Experts Approach for Coherent Forecasts of Aggregated Time Series – README

Requirements:

To install requirements, run:

```
conda env create -f mecats.yml
```

Training:

To train the MECATS model in the paper, first activate the virtual environment:

```
source activate mecats
```

Then run this command:

```
python train.py
```

- All quantitative results, hyper-parameters of experiments, and historical records are saved in the log file under `/save/`
- All figures shown in the paper are saved under `/results/`
- All configurable parameters can be found under `/parameters/`
- Dataset used for experiment can be found under `/data/`

Misc.:

- To switch dataset, modify “DATASET” entry of “/parameters/mecats.json”. Available choices: [“labour”, “M5”, “wiki”, “M3”, “AEdemand”, “EIA”, “sim_cp”].
- To change reconciliation method, modify “RECON” entry of “/parameters/mecats.json”. Available choices: [“sharq”, “base”, “ols”, “mint_wls”, “mint_sam”, “mint_shr”].
- To change base models, modify “MODELS” entry of “/parameters/mecats.json”. Available choices: [“moe”, “ar”, “rnn”, “lstnet”].
- To enable/disable quantile uncertainty wrapper, modify “QUANTILE” entry of “/parameters/mecats.json” to 1/0.
- To enable/disable online updating in general sequential data, modify “ONLINE” entry of “/parameters/mecats.json” to 1/0.