Predicting temperature of earth surface based on annual co2 emission – review

Hubert Szwast

Patryk Chorąży

1. Problem formulation

- The problem is stated sufficiently clearly [1/1]
- A use case has been provided [1/1]
- The data source and its description has been provided [1/1]
- A DAG has been drawn [1/1]
- All confoundings have been described [1/1]

2. Data preprocessing

- Preprocessing has been clearly described [1/1]
- Reasoning and types of actions taken on the dataset have been described [1/1]

3. Model

- Both models have been specified [1/1]
- Difference between the models is provided [1/1]
- The differences are partially justified. The explanation on the change of alpha distribution is murky [0.5/1]
- Models have been described. [1/1]

4. Priors

- It has been partially explained why particular priors for parameters were selected. [0.5/1]
- Prior predictive checks have been done for parameters. [1/1]
- Prior predictive checks have been done for measurements [1/1]
- It is explained how prior parameters were selected but the methodology is wrong as analyzed data has been used to select a prior [0/1]

5. Posterior analysis (model 1)

- There have been no problems with sampling [1/1]
- The samples from posterior predictive distribution are analyzed [1/1]
- The data is consistent with posterior predictive samples and it is sufficiently commented [1/1]
- Parameter marginal distributions have been analyzed [1/1]

6. Posterior analysis (model 2)

- It is stated that there were no problems with sampling [1/1]
- The samples from posterior predictive distribution are analyzed [1/1]
- The data is consistent with posterior predictive samples and it is sufficiently commented [1/1]
- Parameter marginal distributions have been analyzed [1/1]

7. Model comparison

- Models have been compared using information criteria [1/1]
- Result for WAIC has been discussed [1/1]
- Result for PSIS-LOO has been discussed [1/1]
- Model comparison was discussed [1/1]

Total: **25/27 pt ≈ 92.5%**