Steps Forward

Model Comparison

To change the model comparison into a prospective comparison, we need to decide how we are going to do this. One advantage of the missing data approach is that what we do is very clear-cut, but it doesn't assess the model for its purpose. Let θ be all model parameters. Here are few model comparison approaches and my comments about them. Let me know what you think.

- **What we already did**– Select a random hold-out set and impute these heldout data using the full conditional distribution $[Y_i|\theta, Y_{-i}]$

Here are the forward prediction approaches:

- We can use a sequential model fitting approach, but this would be a pain and would involve coding everything again. For any time t where we want to make predictions, our predictive distribution is

$$[Y_t|Y_{t'<t}] = \int_\theta d\theta$$

  . In that case, we could use any subset of the data for validation without double .

(b) We on a subset of the data $(\theta|y_{1:n_{train}}), then make predictions y_{n+1}|y_{1:n} for all n >= n_{train}. We fix the posterior, so we don't update$

Energy Scores are a direct extension of CRPS to multivariate forecasts.

Gneiting, T., Stanberry, L. I., Grimit, E. P., Held, L. and Johnson, N. A. (2008). Assessing probabilistic forecasts of multivariate quantities, with an application to ensemble predictions of surface winds. Test, 17, 211235.

Model Comparison

- Adjust final model