Report

Last time:

- we normalized the count measures into percentages, and then used Dirichlet for emission distribution.

This time:

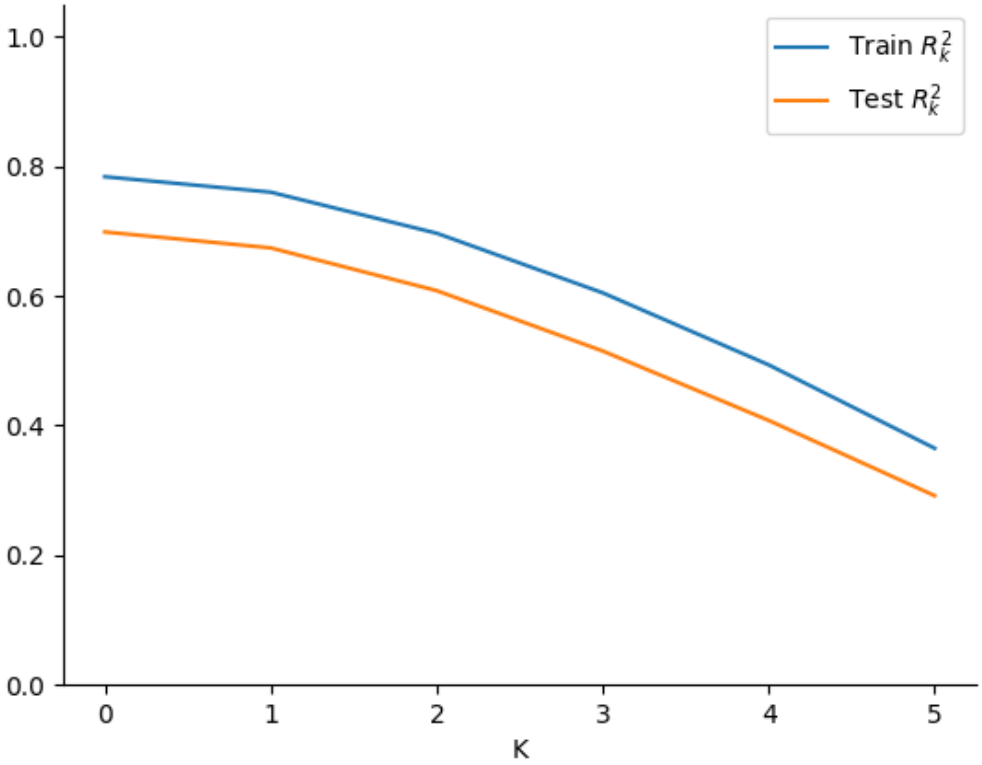
- Play with Compositional-LV simulated data
- Set up a new model, where we use counts as observations, and Poisson as emission
- Set the dynamics in log space

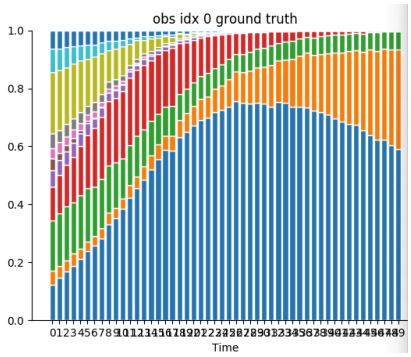
Dirichlet model

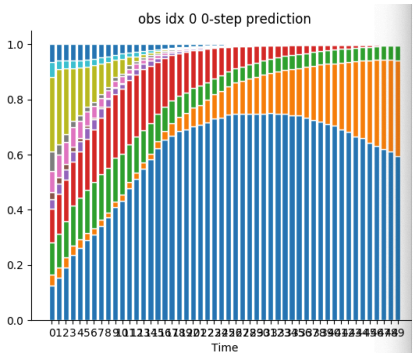
- Compositional LV model (no inputs)

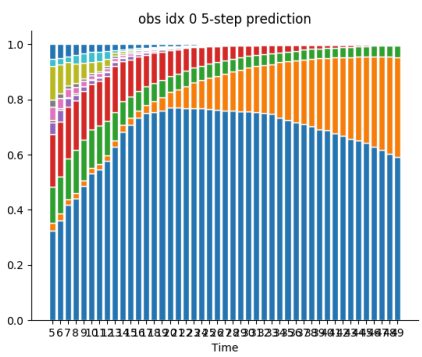
  The model performs well in the following cases

  - Full observation
  - 20% missing obs
  - 40% missing obs
  - 60% missing ops









- Only one patient's data
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- Dynamics in log space

  Implementation:

  - From observation space to hidden space: apply a log transformation.
  - From hidden space to observation space: apply an exp transformation.

  Results:

  - No big improvements

Poisson model

- Works well with the CLV data
- Does not work well with the real data

Some thoughts

Data..

particle degeneracy