Model

Where is a NNGP approximation to

where

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The FCD is given by:

* Sample

Let and . Parts in yellow can be pre-computed. If we assume that , this latter equation becomes

This implies that:

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* Sample and jointly

If we discretize and and assume a discrete uniform prior, then we can sample these parameters using a categorical distribution

The benefit of discretizing is that it is straight-forward to sample and we can pre-compute and

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Notice that

1. if

Then:

Where is very sparse

1. There are pieces of the quadratic term that can be pre-computed

All parts in yellow can be pre-computed. This is beneficial both in terms of computer time and storage space.

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The quantities that will need to be pre-computed are: