Model

Where is a NNGP approximation to

#---------------------------------------------------

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:

#---------------------------------------------------

* Sample

#---------------------------------------------------

* Sample

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

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

#---------------------------------------------------

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.

#------------------------------------------

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