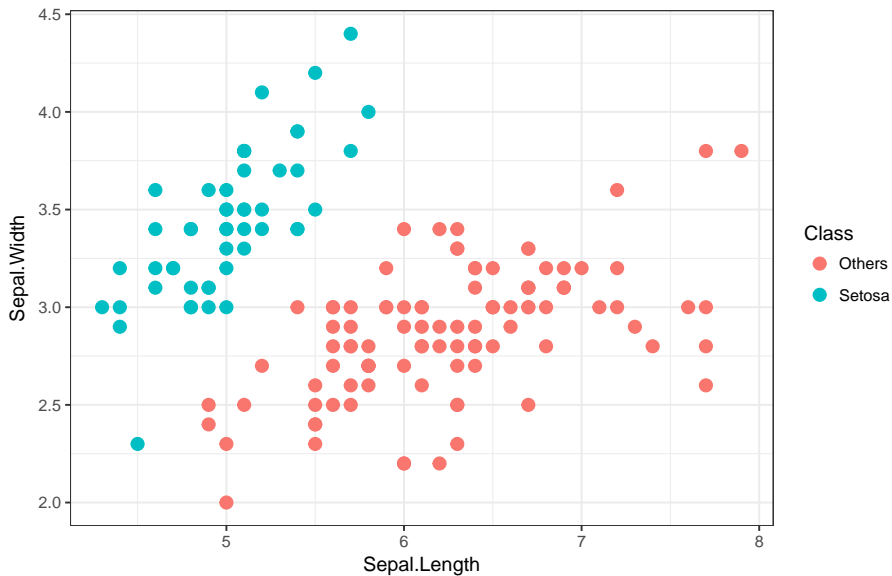


## Fisher's Iris data set



# Fisher's Iris data set - Model fitting

- Variational inference for I-prior probit models implemented in R package `iprobit` (still lots of work to do!).

```
R> system.time(  
+   (mod <- iprobit(y, X))  
+ )  
  
##  
## |=====| 61%  
## Converged after 6141 iterations.  
## Training error rate: 0 %  
##      user  system elapsed  
## 67.857    6.396    74.277
```

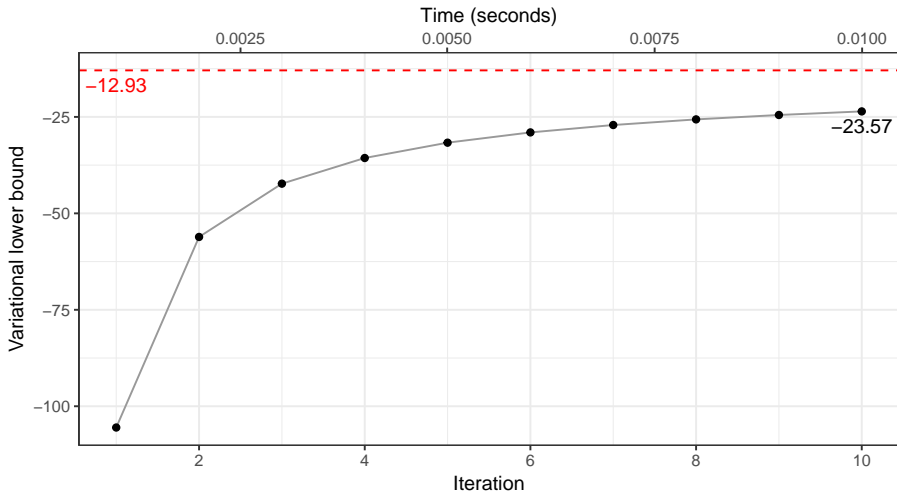
# Fisher's Iris data set - Model summary

```
R> summary(mod)

##
## Call:
## iprobit(y = y, X, maxit = 10000)
##
## RKHS used: Canonical
##
##              Mean    S.E.    2.5%    97.5%
## alpha  -4.1730 0.0816 -4.3330 -4.0129
## lambda  1.2896 0.0142  1.2618  1.3175
##
## Converged to within 1e-05 tolerance. No. of iterations: 6141
## Model classification error rate (%): 0
## Variational lower bound: -12.93486
```

# Fisher's Iris data set - Lower bound

```
R> iplot_lb(mod, niter.plot = 10)
```



# Fisher's Iris data set - Decision boundary

```
R> iplot_decbound(mod)
```

