

R Notebook

Ler bibliotecas

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.1 --
```

```
## v ggplot2 3.3.3    v purrr  0.3.4
## v tibble  3.1.2    v dplyr  1.0.6
## v tidyr   1.1.3    v stringr 1.4.0
## v readr   1.4.0    v forcats 0.5.1
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

Ler dados do arquivo texto

```
dados = read.csv("teste.txt")
```

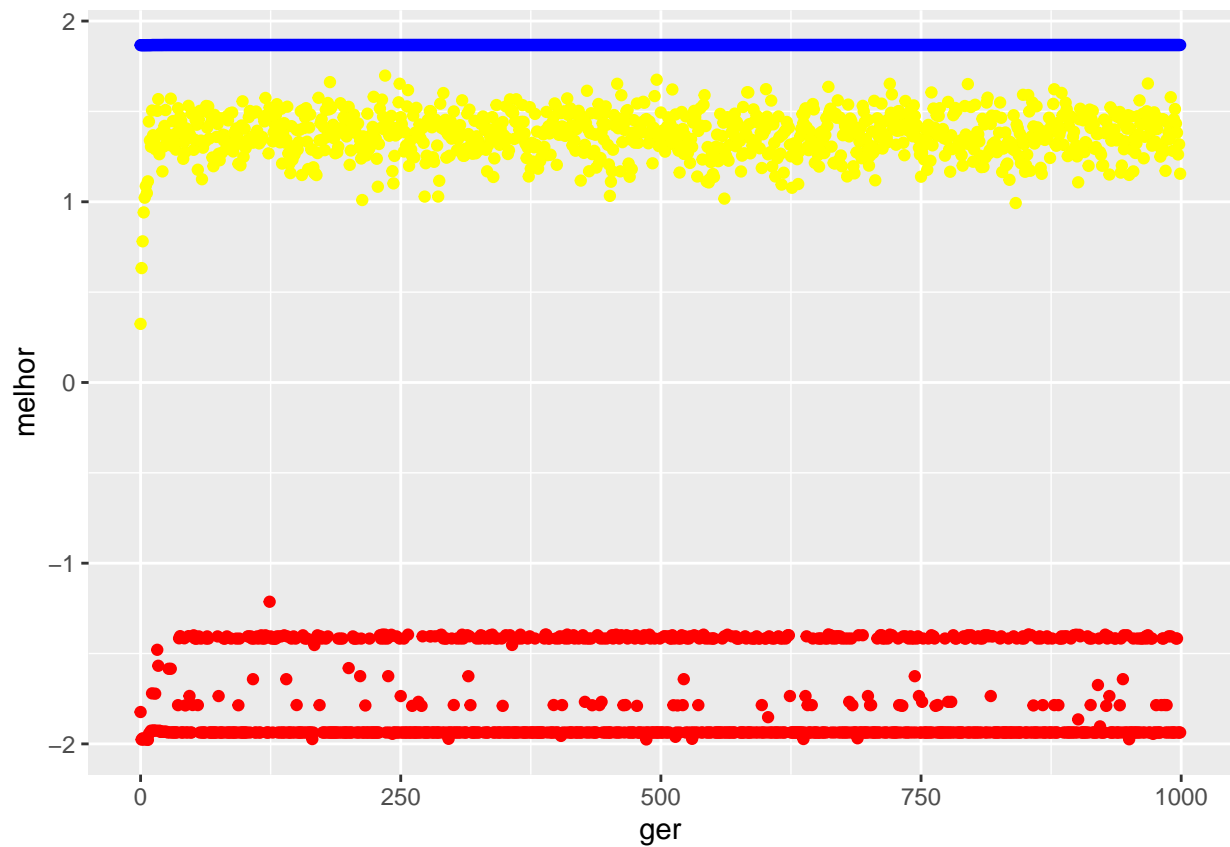
Resumo dos dados:

```
summary(dados)
```

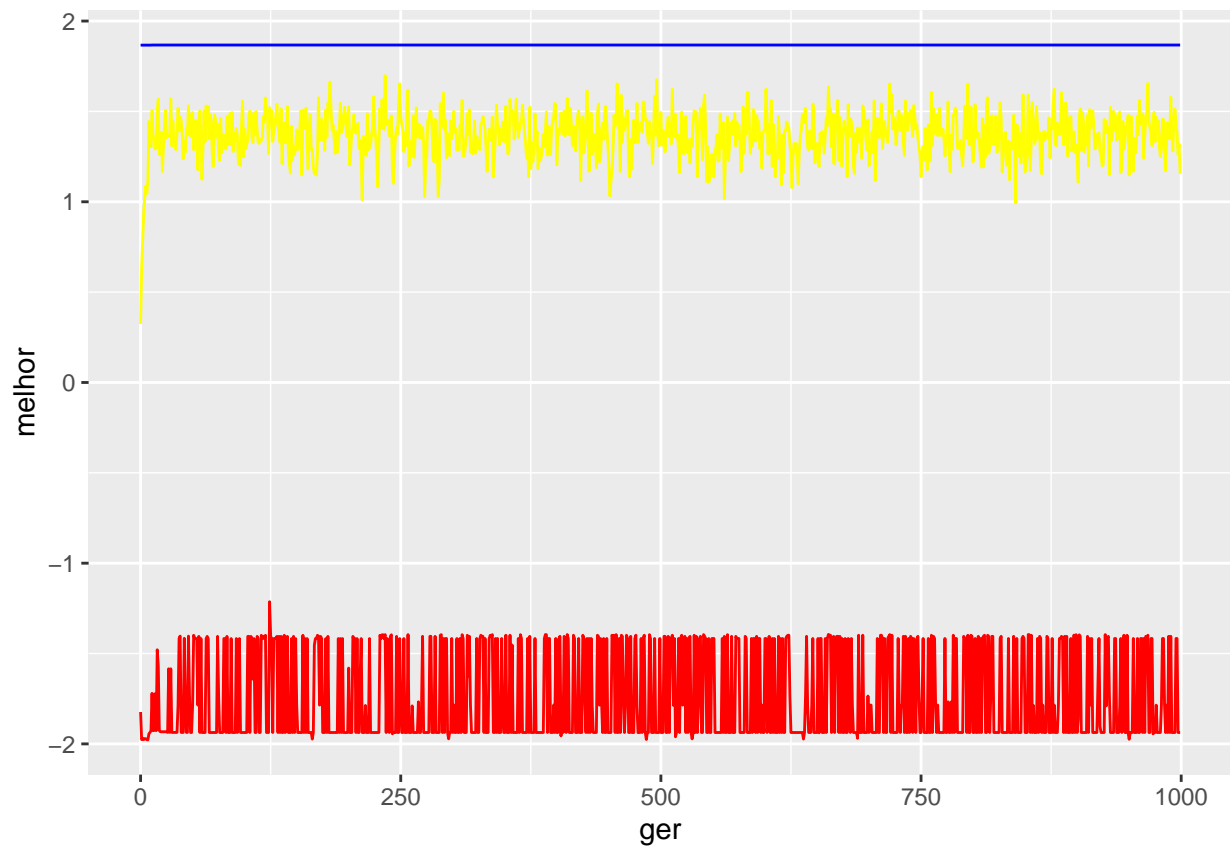
```
##      ger      pior      Medio      melhor
## Min.   : 0.0   Min.   :-1.978   Min.    :0.3242   Min.    :1.867
## 1st Qu.:249.8   1st Qu.: -1.937   1st Qu.:1.2927   1st Qu.:1.867
## Median :499.5   Median : -1.937   Median :1.3750   Median :1.867
## Mean   :499.5   Mean    :-1.745   Mean    :1.3686   Mean    :1.867
## 3rd Qu.:749.2   3rd Qu.: -1.417   3rd Qu.:1.4535   3rd Qu.:1.867
## Max.   :999.0   Max.    :-1.213   Max.    :1.6982   Max.    :1.867
##      dev.padr
## Min.   :0.489
## 1st Qu.:1.086
## Median :1.264
## Mean   :1.259
## 3rd Qu.:1.446
## Max.   :1.940
```

Plota:

```
ggplot(data=dados)+
  geom_point(mapping=aes(x=ger, y=melhor), color="blue")+
  geom_point(mapping=aes(x=ger, y=Medio), color="yellow")+
  geom_point(mapping=aes(x=ger, y=pior), color="red")
```



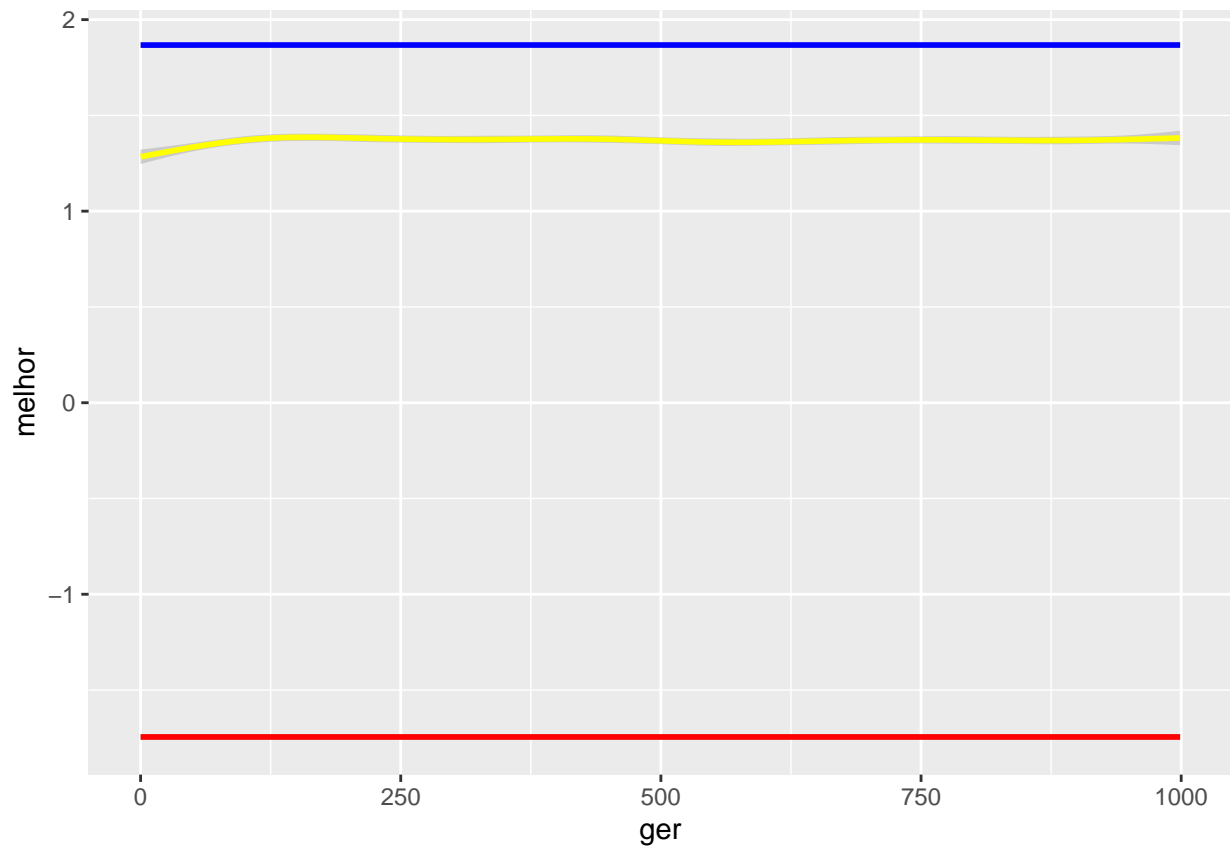
```
ggplot(data=dados)+  
  geom_line(mapping=aes(x=ger, y=melhor), color="blue")+  
  geom_line(mapping=aes(x=ger, y=Medio), color="yellow")+  
  geom_line(mapping=aes(x=ger, y=pior), color="red")
```



Em linhas

```
ggplot(data=dados)+  
  geom_smooth(mapping=aes(x=ger, y=melhor), color="blue")+  
  geom_smooth(mapping=aes(x=ger, y=Medio), color="yellow")+  
  geom_smooth(mapping=aes(x=ger, y=pior), color="red")
```

```
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'  
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'  
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```



Apenas o melhor

```
ggplot(data=dados)+  
  geom_line(mapping=aes(x=ger, y=melhor), color="blue")
```

