Calculation of processing and overprocessing

1 For Bondora log

```
> result = read.csv("output_bondora_1.csv",header = TRUE)
```

Average number of checks that one would do if they follow **our ordering**:

```
> mean(result$nr_checks_our_suggestion)
```

```
[1] 2.796306
```

Average number of checks that one would do if they apply **Wil's method** (constant reject probabilities):

```
> mean(result$nr_checks_wil)
```

```
[1] 2.843984
```

Average number of checks that one would do if for every case they do checks in **random order**

```
> mean(result$nr_checks_random)
```

```
[1] 2.84673
```

Average **overprocessing** - our method

```
> mean(result$nr_checks_our_suggestion - result$minimum_check_number)
```

```
[1] 0.1025961
```

Average **overprocessing** - Wil method

```
> mean(result$nr_checks_wil - result$minimum_check_number)
```
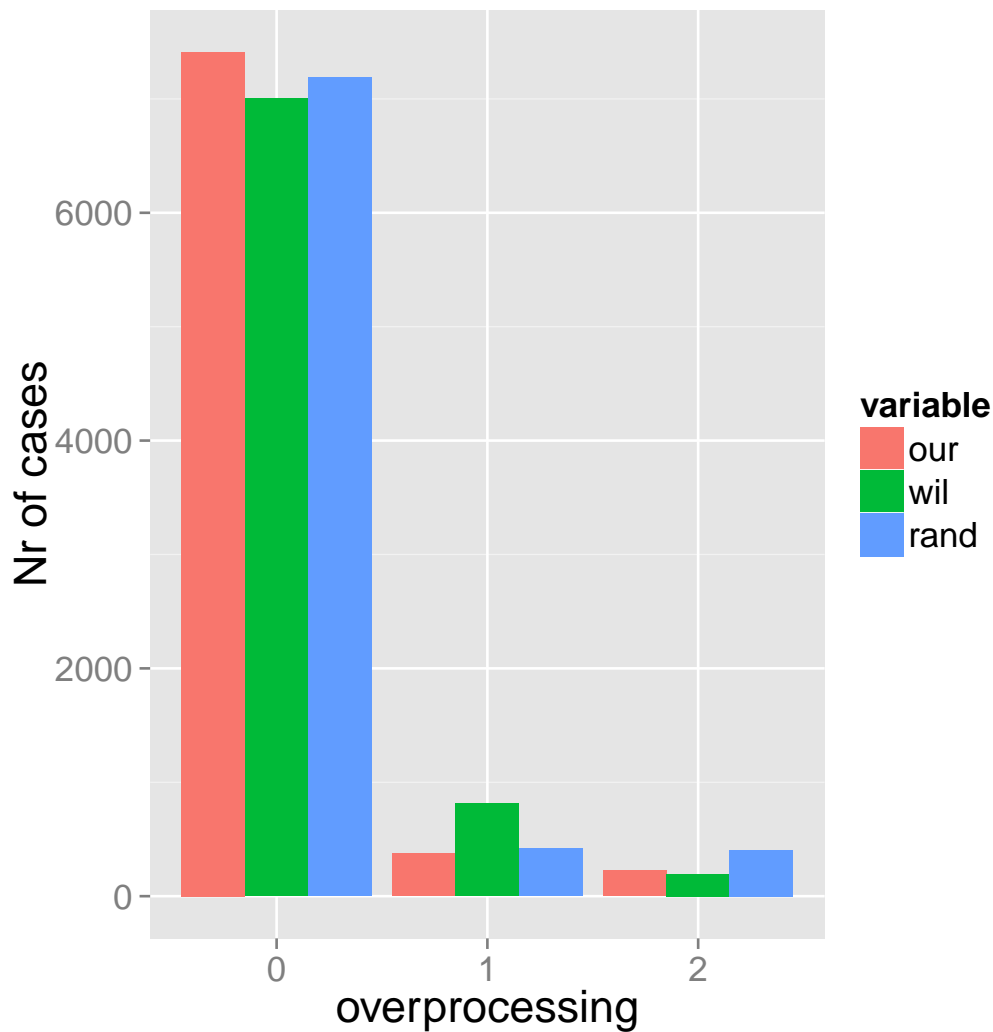
```
[1] 0.1502746
```

Average **overprocessing** - random ordering

```
> mean(result$nr_checks_random - result$minimum_check_number)
```

```
[1] 0.1530205
```

Distribution of overprocessing

```
> result$our = result$nr_checks_our_suggestion - result$minimum_check_number
> result$wil = result$nr_checks_wil - result$minimum_check_number
> result$rand = result$nr_checks_random - result$minimum_check_number
> tt = as.data.frame(cbind(table(result$our), table(result$wil), table(result$rand)))
> colnames(tt)=c("our","wil","rand")
> tt$overprocessing = rownames(tt)
> tt.m = melt(tt, id.vars='overprocessing')
> ggplot(tt.m, aes(overprocessing, value))+ geom_bar(aes(fill = variable), position = "dodge", stat="ident
```

2   For Environmental permit log

```
> result = read.csv("output_envpermit_1.csv",header = TRUE,sep=",")
```

Average number of checks that one would do if they follow **our ordering**:

```
> mean(result$nr_checks_our_suggestion)
```

```
[1] 1.699187
```

Average number of checks that one would do if they apply **Wil's method** (constant reject probabilities):

```
> mean(result$nr_checks_wil)
```

```
[1] 2.97561
```

Average number of checks that one would do if for every case they do checks in **random order**

```
> mean(result$nr_checks_random)
```

```
[1] 2.386179
```

Average **overprocessing** - our method

```
> mean(result$nr_checks_our_suggestion - result$minimum_check_number)
```

```
[1] 0.02439024
```

Average **overprocessing** - Wil method

```
> mean(result$nr_checks_wil - result$minimum_check_number)
```

```
[1] 1.300813
```

Average **overprocessing** - random ordering

```
> mean(result$nr_checks_random - result$minimum_check_number)
```

```
[1] 0.7113821
```

Distribution of overprocessing

```
> result$our = result$nr_checks_our_suggestion - result$minimum_check_number
> result$wil = result$nr_checks_wil - result$minimum_check_number
> result$rand = result$nr_checks_random - result$minimum_check_number
> tt = as.data.frame(cbind(table(result$our), table(result$wil), table(result$rand)))
> colnames(tt)=c("our","wil","rand")
> tt$overprocessing = rownames(tt)
> tt.m = melt(tt, id.vars='overprocessing')
> ggplot(tt.m, aes(overprocessing, value))+ geom_bar(aes(fill = variable), position = "dodge", stat="ident
```