

ILNA_Paper

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```
df <- read.csv("report_days.csv")
```

```
df %>%  
  group_by(year) %>%  
  summarise(  
    n = n(),  
    mean = mean(turnaround_days),  
    median = median(turnaround_days),  
    sd = sd(turnaround_days),  
    iqr = IQR(turnaround_days),  
    min = min(turnaround_days),  
    max = max(turnaround_days)  
  )
```

```
## # A tibble: 2 x 8  
##   year      n mean median    sd   iqr  min  max  
##   <int> <int> <dbl> <int> <dbl> <dbl> <int> <int>  
## 1     1   151  69.9     71  13.8    16    32   102  
## 2     2   101  51.2     49  14.0    17    28    80
```

```
wilcox.test(turnaround_days ~ year, data = df)
```

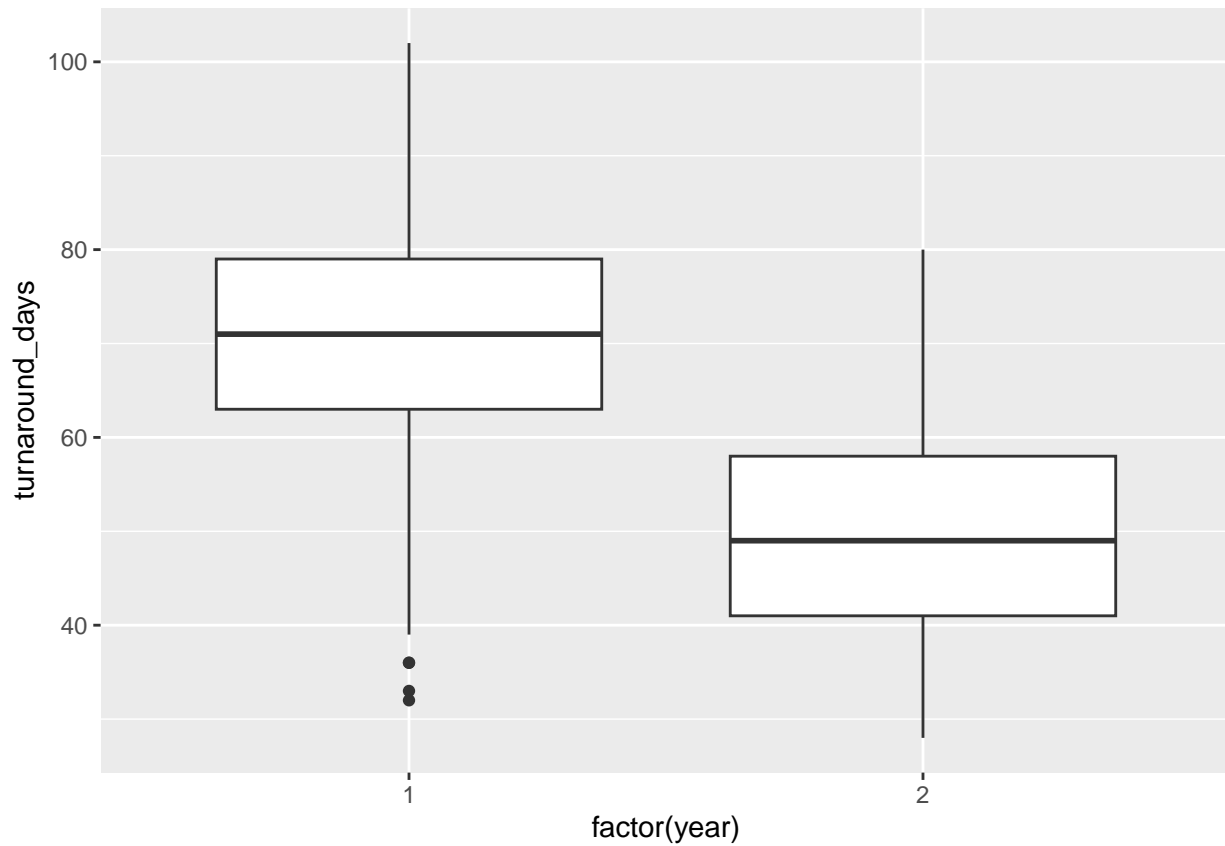
```
##  
## Wilcoxon rank sum test with continuity correction  
##  
## data:  turnaround_days by year  
## W = 12504, p-value < 2.2e-16  
## alternative hypothesis: true location shift is not equal to 0
```

```
t.test(turnaround_days ~ year, data = df)
```

```
##  
## Welch Two Sample t-test  
##  
## data:  turnaround_days by year  
## t = 10.444, df = 212.69, p-value < 2.2e-16  
## alternative hypothesis: true difference in means between group 1 and group 2 is not equal to 0  
## 95 percent confidence interval:  
##  15.14877 22.19711
```

```
## sample estimates:
## mean in group 1 mean in group 2
##      69.90066      51.22772
```

```
ggplot(df, aes(x = factor(year), y = turnaround_days)) +
  geom_boxplot()
```



```
df %>%
  group_by(year) %>%
  summarise(
    pct_within_30 = mean(turnaround_days <= 30) * 100,
    pct_within_45 = mean(turnaround_days <= 45) * 100,
    pct_within_60 = mean(turnaround_days <= 60) * 100,
    pct_within_90 = mean(turnaround_days <= 90) * 100
  )
```

```
## # A tibble: 2 x 5
##   year pct_within_30 pct_within_45 pct_within_60 pct_within_90
##   <int>      <dbl>      <dbl>      <dbl>      <dbl>
## 1     1          0       7.28      19.9      95.4
## 2     2      4.95      36.6      76.2     100
```