Teste F-Fisher - Activiti

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Lendo lm_smells

```
lm_smells <- read.csv(file = 'C:\\Users\\audre\\Desktop\\tcc\\activiti\\lm_activiti.csv')
```

Lendo lem_smells

```
lmfe_smells <- read.csv(file = 'C:\\Users\\audre\\Desktop\\tcc\\activiti\\lem_activiti.csv')
```

Teste F-Fisher

```
var.test(lm_smells$metrics.MethodEffectiveLinesOfCode, lmfe_smells$metrics.MethodEffectiveLinesOfCode, a
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.MethodEffectiveLinesOfCode and lmfe_smells$metrics.MethodEffectiveLinesOfCo
## F = 1.2037, num df = 784, denom df = 1664, p-value = 0.002177
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.068836 1.359138
## sample estimates:
## ratio of variances
##           1.203694
```

```
var.test(lm_smells$metrics.NumberOfFinallyStatements, lmfe_smells$metrics.NumberOfFinallyStatements, al
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.NumberOfFinallyStatements and lmfe_smells$metrics.NumberOfFinallyStatements
## F = 3.6051, num df = 784, denom df = 1664, p-value < 2.2e-16
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  3.201238 4.070712
## sample estimates:
## ratio of variances
##           3.605149
```

```
var.test(lm_smells$metrics.NumberOfCatchStatements, lmfe_smells$metrics.NumberOfCatchStatements, alterna
```

```
##
##  F test to compare two variances
##
```

```
## data:  lm_smells$metrics.NumberOfCatchStatements and lmfe_smells$metrics.NumberOfCatchStatements
## F = 1.1491, num df = 784, denom df = 1664, p-value = 0.02179
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.020372 1.297511
## sample estimates:
## ratio of variances
##           1.149116
```

```
var.test(lm_smells$metrics.ExceptionalLOC, lmfe_smells$metrics.ExceptionalLOC, alternative = "two.sided
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.ExceptionalLOC and lmfe_smells$metrics.ExceptionalLOC
## F = 1.0049, num df = 784, denom df = 1664, p-value = 0.9304
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.8923236 1.1346836
## sample estimates:
## ratio of variances
##           1.004911
```

```
var.test(lm_smells$metrics.NumberOfDummyExceptionHandlers, lmfe_smells$metrics.NumberOfDummyExceptionHa
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.NumberOfDummyExceptionHandlers and lmfe_smells$metrics.NumberOfDummyExceptio
## F = 1.2283, num df = 784, denom df = 1664, p-value = 0.0006688
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.090663 1.386893
## sample estimates:
## ratio of variances
##           1.228276
```

```
var.test(lm_smells$metrics.NumberOfTryStatements, lmfe_smells$metrics.NumberOfTryStatements, alternativ
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.NumberOfTryStatements and lmfe_smells$metrics.NumberOfTryStatements
## F = 1.1091, num df = 784, denom df = 1664, p-value = 0.08787
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.9847977 1.2522742
## sample estimates:
## ratio of variances
##           1.109053
```

```
var.test(lm_smells$metrics.NumberOfThrowStatements, lmfe_smells$metrics.NumberOfThrowStatements, alterna
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.NumberOfThrowStatements and lmfe_smells$metrics.NumberOfThrowStatements
```

```
## F = 1.9952, num df = 784, denom df = 1664, p-value < 2.2e-16
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.771641 2.252829
## sample estimates:
## ratio of variances
##           1.995175
```

```
var.test(lm_smells$metrics.NumberOfTryStatementsWithNoCatchAndFinally, lmfe_smells$metrics.NumberOfTryS
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.NumberOfTryStatementsWithNoCatchAndFinally and lmfe_smells$metrics.NumberOf
## F = 1.0467, num df = 784, denom df = 1664, p-value = 0.4508
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.9294212 1.1818571
## sample estimates:
## ratio of variances
##           1.046689
```

```
var.test(lm_smells$metrics.ThrownExceptionTypesCount, lmfe_smells$metrics.ThrownExceptionTypesCount, al
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.ThrownExceptionTypesCount and lmfe_smells$metrics.ThrownExceptionTypesCount
## F = 1.0189, num df = 784, denom df = 1664, p-value = 0.7546
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.9047078 1.1504314
## sample estimates:
## ratio of variances
##           1.018858
```

```
var.test(lm_smells$metrics.changingClasses, lmfe_smells$metrics.changingClasses, alternative = "two.sid
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.changingClasses and lmfe_smells$metrics.changingClasses
## F = 1.036, num df = 784, denom df = 1664, p-value = 0.5576
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.9199689 1.1698376
## sample estimates:
## ratio of variances
##           1.036045
```

```
var.test(lm_smells$metrics.changingMethods, lmfe_smells$metrics.changingMethods, alternative = "two.sid
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.changingMethods and lmfe_smells$metrics.changingMethods
## F = 2.8226, num df = 784, denom df = 1664, p-value < 2.2e-16
```

```
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  2.506337 3.187071
## sample estimates:
## ratio of variances
##           2.822569
```

```
var.test(lm_smells$metrics.couplingDispersion, lmfe_smells$metrics.couplingDispersion, alternative = "tw
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.couplingDispersion and lmfe_smells$metrics.couplingDispersion
## F = 3.4815, num df = 784, denom df = 1664, p-value < 2.2e-16
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  3.091461 3.931119
## sample estimates:
## ratio of variances
##           3.481521
```

```
var.test(lm_smells$metrics.couplingIntensity, lmfe_smells$metrics.couplingIntensity, alternative = "two
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.couplingIntensity and lmfe_smells$metrics.couplingIntensity
## F = 0.40978, num df = 784, denom df = 1664, p-value < 2.2e-16
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.3638659 0.4626939
## sample estimates:
## ratio of variances
##          0.4097761
```

```
var.test(lm_smells$metrics.cyclomaticComplexity, lmfe_smells$metrics.cyclomaticComplexity, alternative =
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.cyclomaticComplexity and lmfe_smells$metrics.cyclomaticComplexity
## F = 1.2623, num df = 784, denom df = 1664, p-value = 0.0001137
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.120911 1.425357
## sample estimates:
## ratio of variances
##            1.26234
```

```
var.test(lm_smells$metrics.maxCallChain, lmfe_smells$metrics.maxCallChain, alternative = "two.sided")
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.maxCallChain and lmfe_smells$metrics.maxCallChain
## F = 0.068421, num df = 784, denom df = 1664, p-value < 2.2e-16
## alternative hypothesis: true ratio of variances is not equal to 1
```

```
## 95 percent confidence interval:
##  0.06075538 0.07725688
## sample estimates:
## ratio of variances
##          0.0684211
```

```
var.test(lm_smells$metrics.maxNesting, lmfe_smells$metrics.maxNesting, alternative = "two.sided")
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.maxNesting and lmfe_smells$metrics.maxNesting
## F = 0.82315, num df = 784, denom df = 1664, p-value = 0.001747
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.7309270 0.9294509
## sample estimates:
## ratio of variances
##          0.8231506
```

```
var.test(lm_smells$metrics.numberOfAccessedVariables, lmfe_smells$metrics.numberOfAccessedVariables, al
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.numberOfAccessedVariables and lmfe_smells$metrics.numberOfAccessedVariables
## F = 1.5515, num df = 784, denom df = 1664, p-value = 2.114e-13
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  1.377659 1.751839
## sample estimates:
## ratio of variances
##           1.551483
```

```
var.test(lm_smells$metrics.parameterCount, lmfe_smells$metrics.parameterCount, alternative = "two.sided
```

```
##
##  F test to compare two variances
##
## data:  lm_smells$metrics.parameterCount and lmfe_smells$metrics.parameterCount
## F = 0.96537, num df = 784, denom df = 1664, p-value = 0.571
## alternative hypothesis: true ratio of variances is not equal to 1
## 95 percent confidence interval:
##  0.8572159 1.0900404
## sample estimates:
## ratio of variances
##          0.9653737
```