

```
R version 4.4.3 (2025-02-28 ucrt) -- "Trophy Case"
Copyright (C) 2025 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64
```

```
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.
```

```
Natural language support but running in an English locale
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```
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
```

```
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.
```

```
[Previously saved workspace restored]
```

```
> load("C:\\\\Users\\\\anava\\\\OneDrive\\\\Documentos\\\\MBA\\\\IAA-03\\\\Script\\\\saidat2")
> source("C:\\\\Users\\\\anava\\\\OneDrive\\\\Documentos\\\\MBA\\\\IAA-03\\\\Script\\\\T2")
Error: unexpected symbol in "source(\"C"
> source("C:\\\\Users\\\\anava\\\\OneDrive\\\\Documentos\\\\MBA\\\\IAA-03\\\\Script\\\\T2")
Error in file(filename, "r", encoding = encoding) :
  cannot open the connection
In addition: Warning message:
In file(filename, "r", encoding = encoding) :
  cannot open file 'C:\\\\Users\\\\anava\\\\OneDrive\\\\Documentos\\\\MBA\\\\IAA-03\\\\Script\\\\T2': No such file or
directory
> source("C:\\\\Users\\\\anava\\\\OneDrive\\\\Documentos\\\\MBA\\\\IAA-03\\\\Script\\\\T2.r")
Installing package into 'C:/Users/anava/AppData/Local/R/win-library/4.4'
(as 'lib' is unspecified)
--- Please select a CRAN mirror for use in this session ---
trying URL 'https://cran-r.c3sl.ufpr.br/bin/windows/contrib/4.4/e1071_1.7-16.zip'
Content type 'application/zip' length 674211 bytes (658 KB)
downloaded 658 KB
```

```
package 'e1071' successfully unpacked and MD5 sums checked
```

```
The downloaded binary packages are in
  C:\\\\Users\\\\anava\\\\AppData\\\\Local\\\\Temp\\\\RtmpoN9FRv\\\\downloaded_packages
Installing package into 'C:/Users/anava/AppData/Local/R/win-library/4.4'
(as 'lib' is unspecified)
trying URL 'https://cran-r.c3sl.ufpr.br/bin/windows/contrib/4.4/randomForest_4.7-1.2.zip'
Content type 'application/zip' length 226197 bytes (220 KB)
downloaded 220 KB
```

```
package 'randomForest' successfully unpacked and MD5 sums checked
```

```
The downloaded binary packages are in
  C:\\\\Users\\\\anava\\\\AppData\\\\Local\\\\Temp\\\\RtmpoN9FRv\\\\downloaded_packages
Installing package into 'C:/Users/anava/AppData/Local/R/win-library/4.4'
(as 'lib' is unspecified)
trying URL 'https://cran-r.c3sl.ufpr.br/bin/windows/contrib/4.4/neuralnet_1.44.2.zip'
Content type 'application/zip' length 124825 bytes (121 KB)
downloaded 121 KB
```

```
package 'neuralnet' successfully unpacked and MD5 sums checked
```

```
The downloaded binary packages are in
  C:\\\\Users\\\\anava\\\\AppData\\\\Local\\\\Temp\\\\RtmpoN9FRv\\\\downloaded_packages
Installing package into 'C:/Users/anava/AppData/Local/R/win-library/4.4'
(as 'lib' is unspecified)
trying URL 'https://cran-r.c3sl.ufpr.br/bin/windows/contrib/4.4/kernlab_0.9-33.zip'
Content type 'application/zip' length 2322323 bytes (2.2 MB)
downloaded 2.2 MB
```

```
package 'kernlab' successfully unpacked and MD5 sums checked
Warning: cannot remove prior installation of package 'kernlab'
Warning: restored 'kernlab'
```

```
The downloaded binary packages are in
```

```
C:\Users\anava\AppData\Local\Temp\RtmpoN9FRv\downloaded_packages
Installing package into 'C:/Users/anava/AppData/Local/R/win-library/4.4'
(as 'lib' is unspecified)
trying URL 'https://cran-r.c3sl.ufpr.br/bin/windows/contrib/4.4/caret_7.0-1.zip'
Content type 'application/zip' length 3604364 bytes (3.4 MB)
downloaded 3.4 MB

package 'caret' successfully unpacked and MD5 sums checked
Warning: cannot remove prior installation of package 'caret'
Warning: restored 'caret'

The downloaded binary packages are in
  C:\Users\anava\AppData\Local\Temp\RtmpoN9FRv\downloaded_packages
Loading required package: ggplot2
Loading required package: lattice
      DAP          HT          HP          VOL
Min. :27.50    Min. :22.80    Min. :1.000    Min. :0.6982
1st Qu.:32.50   1st Qu.:25.50   1st Qu.:1.700   1st Qu.:1.0553
Median :35.25   Median :26.40   Median :2.225   Median :1.3006
Mean   :35.86   Mean   :26.24   Mean   :2.135   Mean   :1.3583
3rd Qu.:39.05   3rd Qu.:27.15   3rd Qu.:2.562   3rd Qu.:1.6191
Max.   :49.00    Max.   :28.40   Max.   :3.400   Max.   :2.5245
-----treinar modelo base random forest-----
note: only 2 unique complexity parameters in default grid. Truncating the grid to 2 .

-----treinar modelo base-svm -----
-----treinar modelo neuralnet -----
-----treinar modelo SPURR -----

-----r2 Metrica-----
-----r2 rf -----
[1] 0.8535647
-----r2 svm -----
[1] 0.8484652
-----r2 rn -----
[1] 0.882399
-----r2 alom -----
[1] 0.8356895

-----syx Metrica-----
-----syx rf -----
[1] 0.1445527
-----syx base-svm -----
[1] 0.1470481
-----syx rn -----
[1] 0.1295415
-----syx alom -----
[1] 0.1531214

-----syx perc Metrica-----
-----syx perc rf -----
[1] 67.99302 122.81068 58.59636 99.52874 53.65459 119.37169 137.28685
[8] 61.85466 84.22237 82.63716 79.99108 125.70055 77.26335 116.13644
[15] 97.73258 118.38257 97.78208 126.07391 98.83739 152.26326
-----syx perc base-svm -----
[1] 67.12011 121.23401 57.84408 98.25096 52.96576 117.83917 135.52432
[8] 61.06055 83.14110 81.57624 78.96414 124.08678 76.27142 114.64545
[15] 96.47786 116.86275 96.52672 124.45534 97.56849 150.30846
-----syx perc rn -----
[1] 67.97508 122.77827 58.58089 99.50247 53.64043 119.34019 137.25062
[8] 61.83834 84.20014 82.61535 79.96997 125.66738 77.24296 116.10579
[15] 97.70678 118.35133 97.75627 126.04064 98.81131 152.22307
-----syx perc alom -----
[1] 67.64653 122.18485 58.29775 99.02154 53.38117 118.76338 136.58724
[8] 61.53945 83.79318 82.21604 79.58345 125.05999 76.86962 115.54462
[15] 97.23454 117.77930 97.28378 125.43144 98.33372 151.48733
There were 50 or more warnings (use warnings() to see the first 50)
>
```