Package: ImFoR (via r-universe)

Type Package

Title Non-Linear Height Diameter Models for Forestry

Version 0.1.0

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Description Tree height is an important dendrometric variable and
forms the basis of vertical structure of a forest stand. This
package will help to fit and validate various non-linear height
diameter models for assessing the underlying relationship that
exists between tree height and diameter at breast height in
case of conifer trees. This package has been implemented on
Naslund, Curtis, Michailoff, Meyer, Power, Michaelis-Menten and
Wykoff non linear models using algorithm of Huang et al.
(1992) <doi:10.1139/x92-172> and Zeide et al. (1993)
<doi:10.1093/forestscience/39.3.594>.

License GPL-3

Encoding UTF-8

Imports stats, minpack.lm, Metrics, caret, tidyverse, nlme, ggpubr,
ggplot2

RoxygenNote 7.2.1

Depends R (>= 2.10)

NeedsCompilation no

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Repository https://imiqbal.r-universe.dev

RemoteUrl https://github.com/cran/ImFoR

RemoteRef HEAD

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Description

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Usage

```
ImFoR(data, train_frac = 0.8)
```

Arguments

data   Datasets

train_frac   Train-Test fraction

Value

- metrics: Metrics of all applied models
- plot: Plot

References

- Jeelani, M.I., Tabassum, A., Rather, K and Gul,M.2023. Neural Network Modeling of Height Diameter Relationships for Himalayan Pine through Back Propagation Approach. Journal of The Indian Society of Agricultural Statistics. 76(3): 169–178

- Tabassum, A., Jeelani, M.I., Sharma,M., Rather, K R ., Rashid, I and Gul,M.2022. Predictive Modelling of Height and Diameter Relationships of Himalayan Chir Pine . Agricultural Science Digest - A Research Journal. DOI:10.18805/ag.D-5555

- Huang, S., Titus, S.J., and Wiens, D.P. 1992. Comparison of nonlinear height-diameter functiond for major Alberta tree species. Can J. For. Res. 22: 1297-1304. DOI : 10.1139/x92-172

- - Zeide, B. 1993. Analysis of growth equations. Forest Science 39(3):594-616. doi:10.1093/forestscience/39.3.594

Examples

```
library("ImFoR")
data <- system.file("extdata", "data_test.csv", package = "ImFoR")
data_test <- read.csv(data)
Model<-ImFoR(data =data_test)
```

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