

Online Resource 4. R script for model implementation (with examples).

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# This script demonstrates the usage of the Citation_prediction function
# to predict the future citation count of a Systematic Review between years 6 and 10 after publication.

# 1. Load the models and relevant function.
# Load 'citation_prediction.RData' file from GitHub repository.
load(url("https://github.com/marquescruz/citation_prediction/raw/main/citation_prediction.RData"))

# 2. Example Predictions

# 2.1. Predicting for an article with no citations in the first five years.
citations <- c(0,0,0,0,0) # Zero citations for each of the first five years.
Citation_prediction(citations)

# 2.2. Predicting for an article cited 5 times each year from years 1-5.
citations <- c(5,5,5,5,5) # Five citations per year for five years.
Citation_prediction(citations)

# 2.2.1. Same article, but only considering citation terciles for prediction.
Citation_prediction(citations, prediction = "tercile")

# 2.2.2. Same article, but only considering citation quartiles and combined quartiles for prediction.
Citation_prediction(citations, prediction = c("quartile", "combined_quartile"))

# 2.3. Predicting for an article cited 15 times each year from years 1-5.
citations <- c(15,15,15,15,15)
Citation_prediction(citations)

# 2.3.1. Same article, excluding the range of expected citations from the prediction.
Citation_prediction(citations, range = FALSE)

# 2.3.2. Same article, excluding classification probabilities from the prediction.
Citation_prediction(citations, probabilities = FALSE)
```