

# Objectives

This tutorial is meant to introduce pomodoro package using a case study. The goal of pomodoro is to provide functions to make predictive modeling easy.

## Dataset

ADD LATEX TABLES <https://bookdown.org/yihui/rmarkdown/pdf-document.html> Some text

Some text

Table 1: Transformations Associated with the Johnson System

Johnson Family	Transformation	Parameter Conditions	X Condition
$S_B$	$Z = \gamma + \eta \ln\left(\frac{X-\epsilon}{\lambda+\epsilon-X}\right)$	$\eta, \lambda > 0, -\infty < \gamma, \epsilon < \infty$	$\epsilon < X < \epsilon + \lambda$
$S_L$	$Z = \gamma + \eta \ln(X - \epsilon)$	$\eta > 0, -\infty < \gamma, \epsilon < \infty$	$X > \epsilon$
$S_U$	$Z = \gamma + \eta \sinh^{-1}\left(\frac{X-\epsilon}{\lambda}\right)$	$\eta, \lambda > 0, -\infty < \gamma, \epsilon < \infty$	$-\infty < X < \infty$

## Overview

Package pomodoro runs bagging, boosting, random forest, multinomial logistic and logistic models. The purpose of this package is to report the predictive modelling results with ease.

## Installation

You can install the released version of pomodoro from CRAN with:

```
install.packages("pomodoro")
library(pomodoro)
```

## Building a Selected Model

After the cleaning the data set... blabla

### Selecting Dependent Variables

xvar

### Selecting Independent Variables

yvar

```
yvar <- c("Loan.Type") #or yvar <- c("multi.level")
xvar <- c("sex", "married", "age", "havejob", "educ", "political.afl",
"rural", "region", "fin.intermediaries", "fin.knowledge", "income")
set.seed(123)
BchMk.RF <- RF_Model(sample_data, xvar, yvar)
```

## Estimated Models

To model all the data set and its splits, interchangeably with 3 assets owning variable.

```
CCP.RF <- Estimate_Models(sample_data, yvar, xvec = xvar, exog = "political.afl",
xadd = c("networth", "networth_homeequity", "liquid.assets") ,
type = "RF", dnames = c("0", "1"))
```

## Combined Performance

To find combined model performance.

```
Sub.CCP.RF <- list(Mdl.1 = CCP.RF$EstMdl$'D.1 + networth',  
Mdl.0 = CCP.RF$EstMdl$'D.0 + networth')  
CCP.NoCCP.RF <- Combined_Performance(Sub.CCP.RF)
```

Have Fun!