## Feature Selection with Lasso

This example uses Lasso (L1 regularization) to select relevant features based on their relationship to the target variable. L1 induces sparsity in coefficients, removing less important features.

Prerequisites - R packages: daltoolbox, daltoolboxdp

# Installation (if needed)  
#install.packages("daltoolboxdp")

# Loading packages  
library(daltoolbox)  
library(daltoolboxdp)

# Example data  
iris <- datasets::iris

# Lasso - step by step  
  
# 1) Fit the selector with target "Species"  
myfeature <- fit(fs\_lasso("Species"), iris)  
  
# 2) View selected features  
print(myfeature$features)

## [1] "Sepal.Width" "Petal.Length" "Petal.Width"

# 3) Transform data to keep selected features + target  
data <- transform(myfeature, iris)  
print(head(data))

## Sepal.Width Petal.Length Petal.Width Species  
## 1 3.5 1.4 0.2 setosa  
## 2 3.0 1.4 0.2 setosa  
## 3 3.2 1.3 0.2 setosa  
## 4 3.1 1.5 0.2 setosa  
## 5 3.6 1.4 0.2 setosa  
## 6 3.9 1.7 0.4 setosa