# Audit sampling with jfa:: CHEAT SHEET



# **Basics**

jfa is an R package that facilitates statistical planning, selection, and evaluation of audit samples.

The package provides five functions that allow users to easily apply Bayesian or classical probability theory in the standard audit sampling workflow.

# Installation

Installing the package can be done via:
install.packages('jfa')

Loading the package can be done via: library (jfa)

# Example

The blue code blocks next to the function descriptions provide a working example of the intended workflow.

The data for this example can be loaded via: data('BuildIt')

### Construct a prior probability distribution (optional)

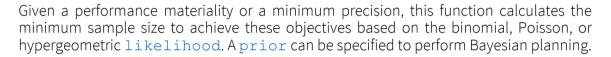
jfa::auditPrior()

This function creates a prior distribution for the misstatement in the population based on audit evidence specified via the method argument. The prior distribution can be used as input for the prior argument in other functions to perform Bayesian inference.

• likelihood: Specifies the family of the prior probability distribution.

## Calculate the minimum sample size

jfa::planning()



- materiality: A fraction specifying the maximum tolerable misstatement.
- expected: A fraction or an integer specifying the tolerable errors in the sample.
- conf.level: A fraction specifying the confidence level needed.



# Select the required items from the population

jfa::selection()

This function takes a data frame and performs sampling according to one of three popular method's: random sampling, cell sampling, or fixed interval sampling. Sampling is done in combination with one of two sampling units: items (rows) or monetary units.



# Evaluate the misstatement in the population

jfa::evaluation()



This function takes a data sample (using data, values, and values.audit) or summary statistics from a sample (using x and n) and performs statistical evaluation on the misstatement in the population according to the specified method. A prior can be specified to perform Bayesian evaluation.

• prior: An object returned by auditPrior() that specifies the prior distribution.