The bootstrap procedure

Set up required data and software

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11 March 2019

Science for sustainable seas

TAF bootstrap procedure

All data and software used in TAF analyses are *declared and described* using metadata files:

DATA.bib

SOFTWARE.bib

The metadata files are *processed* using the R function

`taf.bootstrap()`

Metadata

DATA.bib describes data that will be used in the analysis

Each metadata entry looks like this:

```
@Misc{PLE7DFleet_2016.txt,
  originator = {WGNSSK},
  year       = {2016},
  title      = {Survey indices: UK_BTS, FR_GFS, IN_YFS},
  period     = {1987-2015},
  source     = {file},
}
```

The R function draft.data() can be helpful

Metadata

SOFTWARE.bib describes software that will be used in the analysis

Each metadata entry looks like this:

```
@Manual{FLAssess,
  author  = {Laurie T Kell},
  year    = {2015},
  title   = {{FLAssess}: Generic classes and
             methods for stock assessment models},
  version = {2.5, committed 2015-07-17},
  source  = {flr/FLAssess@5102b97},
}
```

The R function draft.software() can be helpful

The `taf.bootstrap()` function

This function should be called from the *top directory* of a TAF analysis

It looks for a directory called `bootstrap` and prepares data files and software according to metadata specifications

The `taf.bootstrap()` function

The bootstrap procedure consists of the following steps:

1. If a directory `bootstrap/initial/config` contains model configuration files, they are copied to `bootstrap/config`
2. If a `bootstrap/DATA.bib` metadata file exists, it is processed with `process.bib()`
3. If a `bootstrap/SOFTWARE.bib` metadata file exists, it is processed with `process.bib()`

The `taf.bootstrap()` function

After the bootstrap procedure, data and software have been documented and are ready to be used in the subsequent analysis:

- `bootstrap/config` with model configuration files
- `bootstrap/data` with data files
- `bootstrap/library` with R packages compiled for the local platform
- `bootstrap/software` with software files, such as R packages in `tar.gz` source code format