
Kingman Documentation

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Jerome Kelleher

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This is the documentation for the `kingman` package. This package is a simple example of how to put together a Python package, using current best practises. See the [WTCHG CodeMonkeys post](#) for more details.

Contents:

API Documentation

An example Python package, illustrating current best-practises.

`kingman.simulate(sample_size, random_seed=None)`

Simulates the Kingman coalescent for the specified sample size and random seed.

Returns a tuple (parent, time) which describes the simulated history of the sample as an oriented forest. `parent` is a list of integers, in which the parent of node `j` is `parent[j]`. `time` an array of floating point values in which the time at which node `j` was created is `time[j]`. See <http://jeromekelleher.github.io/ercs/#oriented-trees-and-forests> for further information on oriented forests.

Time is measured in units of $4N_e$ generations, following Hudson's ms.

Parameters

- **sample_size** (*integer*) – The sample size; must be ≥ 2 .
- **random_seed** (*integer or None*) – The random seed for simulations

Return type (list, list)

Command line interface

This is the documentation for the `kingman` program, a simple command line interface to the simulations for the Kingman coalescent.

Note: TODO: Find good sphinx based method for documenting a CLI. We should be able to import the command line parser from the `kingman` package, and generated the documentaion from this.

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