Package 'gptoolsStan'

Title Gaussian Processes on Graphs and Lattices in 'Stan'

Version 1.0.0

Description Gaussian processes are flexible distributions to model functional data. Whilst theoretically appealing, they are computationally cumbersome except for small datasets. This package implements two methods for scaling Gaussian process inference in 'Stan'. First, a sparse approximation of the likelihood that is generally applicable and, second, an exact method for regularly spaced data modeled by stationary kernels using fast Fourier methods. Utility functions are provided to compile and fit 'Stan' models using the 'cmdstanr' interface. References: Hoffmann and Onnela (2025) <doi:10.18637/jss.v112.i02>.

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Encoding UTF-8

Language en-US

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, cmdstanr

Additional_repositories https://stan-dev.r-universe.dev

VignetteBuilder knitr

NeedsCompilation no

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Repository CRAN

Date/Publication 2025-03-17 19:20:02 UTC

Contents

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gptools_include_path   *Get the 'gptoolsStan' include path for compiling 'Stan' programs.*

Description

Get the 'gptoolsStan' include path for compiling 'Stan' programs.

Usage

```
gptools_include_path()
```

Value

Path to the directory containing source files for 'gptoolsStan' as characters.

Examples

```
## Not run:
library(cmdstanr)
library(gptoolsStan)

# Compile the model with paths set up to include 'Stan' sources from 'gptoolsStan'.
model <- cmdstan_model(
    stan_file = "/path/to/your/model.stan",
    include_paths = gptools_include_path(),
)

## End(Not run)
```

Index