Package 'COCAcaller'

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Type Package

Title Identify COCA subtype from miRNA expression in chronic pancreatitis

Author Zaoqu Liu [aut, cre] (<https://orcid.org/0000-0002-0452-742X>)

Maintainer Zaoqu Liu <liuzaoqu@163.com>

Description Identify COCA subtype from miRNA expression in chronic pancreatitis.

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Contents

`COCAcaller` *Identify COCA Subtype from miRNA Expression in Chronic Pancreatitis*

Description

This function identifies the COCA subtype from miRNA expression data in chronic pancreatitis patients. It uses a pre-trained multi-layer perceptron classifier (mlpcla) to predict the probability of each sample belonging to one of the COCA subtypes (COCA1, COCA2, COCA3) or being normal.

Usage

```
COCAcaller(data)
```

Arguments

data	A miRNA expression matrix or dataframe with sample rows and gene columns. Each row represents a sample and each column represents a gene.

Details

This function takes a miRNA expression dataset as input and applies a pre-trained multi-layer perceptron classifier (mlpcla) to predict the subtype of chronic pancreatitis for each sample. The function outputs a dataframe with the probabilities of each sample being classified as Normal, COCA1, COCA2, or COCA3, along with the predicted group with the highest probability. The classifier should be trained prior to using this function.

Value

A dataframe with the predicted probabilities for each COCA subtype and the normal category. Additionally, it includes a column indicating the predicted group (Normal, COCA1, COCA2, COCA3) with the highest probability for each sample.

Author(s)

Zaoqu Liu; Email: liuzaoqu@163.com

COCA_app *COCA Shiny Application*

Description

A Shiny app for identifying COCA subtypes based on miRNA expression data.

Usage

```
COCA_app()
```

Details

COCA_app

A Shiny application to identify COCA Subtypes from miRNA Expression. This function sets up and launches a Shiny app that allows users to input miRNA feature files, predict COCA subtypes, and view the results.

This Shiny application is designed to identify COCA subtypes from miRNA expression data. The app checks and installs necessary packages, sets up the UI, and handles user input to predict COCA subtypes using a pre-trained neural network model. The app includes a contact page for user feedback and support, and an informative home page with a carousel and updates.

It first checks and installs any necessary packages. Then, it sets up the user interface (UI) and server logic. The UI consists of multiple pages, including a home page and a contact page. The server logic handles user input, data validation, model prediction, and feedback form submission.

Value

This function does not return a value. It launches a Shiny application.

Author(s)

Zaoqu Liu; Email: liuzaoqu@163.com

`mlpcla` *mlpcla*

Description

Model for predicting COCA subtypes

Usage

```
mlpcla
```

Format

A list.

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