imageRy rapid manual

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```
devtools::install_github("ducciorocchini/imageRy")
```

Packages needed

- library(terra)
- library(ggplot2)
- library(viridis)

Functions

Functions described in a hypothetical flow: + 1. Functions for data import + 2. Functions for data visualisation + 3. Functions for data analysis

1. Functions for data import

im.list()

```
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```

It lists the data available in the package.

im.import()

```
mato <- im.import("matogrosso_ast_2006209_lrg.jpg")
```

It directly imports data from the package.

2. Functions for data visualisation

im.plotRGB()

```
im.plotRGB(mato, 2, 1, 3)
```

It directly plots data in an RGB space. Bands are chosen by the operator.

im.plotRGB.auto()

```
im.plotRGB.auto(mato, 2, 1, 3)
```

It directly plots data using bands 1, 2 and 3 in an RGB space.

im.ggplot()

```
im.ggplot(mato, 1)
```

It plots by ggplot one band chosen by the user. Some time is needed.

3. Functions for data analysis

im.dvi()

```
im.dvi(mato, 1, 2)
```

It calculates DVI specifying NIR and red bands.

im.ndvi()

```
im.ndvi(mato, 1, 2)
```

It calculates NDVI specifying NIR and red bands.

im.classify()

```
im.classify(mato, num_clusters = 3)
```

It classifies images by k-means simply stating the number of clusters.

im.pca()

```
im.pca(mato)
```

It performs PCA on an image.

im.refresh()

```
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```

It re-installs the package from github.