pymatreader Documentation

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CHAPTER 1

Introduction

pymatreader is a small python package that provides a consistent way of loading all versions of Matlab .mat files.

pymatreader returns a python `dict` with all the variables found in the .mat file. Matlab data types are converted to python datatypes as follows:

Matlab	Python
Primitive types (double, single, int, string)	Primitive numpy types (double, single, int, string)
Structure	dict
Matrix/Vector	numpy ndarray
Cell array	list
Struct array	dict containing lists

CHAPTER 2

Install

pymatreader is available via pypi:

```
pip install pymatreader
```

You can also install it via conda:

```
conda install -c obob pymatreader
```

CHAPTER 3

Reference

pymatreader only has one function:

pymatreader.**read_mat**(*filename*, *variable_names=None*, *ignore_fields=None*, *uint16_codec=None*)

This function reads .mat files of version <7.3 or 7.3 and returns the contained data structure as a dictionary of nested substructure similar to scipy.io.loadmat style.

Parameters

- **filename** (*str*) – Path and filename of the .mat file containing the data.
- **variable_names** (*list of strings, optional*) – Reads only the data contained in the specified dict key or variable name. Default is None.
- **ignore_fields** (*list of strings, optional*) – Ignores every dict key/variable name specified in the list within the entire structure. Only works for .mat files v 7.3. Default is [].
- **uint16_codec** (*str | None*) – If your file contains non-ascii characters, sometimes reading it may fail and give rise to error message stating that "buffer is too small". uint16_codec allows to specify what codec (for example: 'latin1' or 'utf-8') should be used when reading character arrays and can therefore help you solve this problem.

Returns A structure of nested dictionaries, with variable names as keys and variable data as values.

Return type dict

CHAPTER 4

In case of problems

Please raise an issue here: https://gitlab.com/obob/pymatreader/issues

CHAPTER 5

If you want to contribute

Your contribution is always welcome!

pymatreader is developed on gitlab: https://gitlab.com/obob/pymatreader

Please make sure to include proper tests and adhere to the PEP 8 Style Guide.

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