

Matlab style guide

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1 Mlint everything

Each and every function should not receive any remarks or warnings when checked with *mlint*. Also, please try to look at your code from some distance, if you are appalled, take the hint and revise.

2 Functions

It is recommended to use functions for operations that are well defined and can be used as building blocks. If you are writing a function that you think you might use from one location, it is advisable to code it as an inner function (second function in the same m file).

Naming function

- All function names must begin with a capital letter.
- The first word must be a verb
- Each additional word must start with a capital letter as well without any punctuation like "_" or "-".
- Good examples: ComputeAllSequences, IdentifyOutLayers, OrderGroups.
- Bad examples: computeAllSequences, OutLayers, Order_Groups.
- A boolean function can use question words instead of verbs, e.g, HasLeaves, IsInvertible, CanBePruned, and so on.

When it comes down to documenting functions, after the declaration line you must include the following

- One line explanation (for key word search)
- a copy of the function declaration
- A short explanation of the functionality.
- for each input or output variable separately, give it's type and expectable sizes. If an input is an option string, list all possible inputs.

3 Scripts

It is ok use scripts. But only if used correctly.

- The first command in any script must be *clear*;
- Any script should be callable from the command line.
- Script should ONLY be called from the command line. In other words no function or script are allowed to run scripts.
- Script names must begin with the word "Script". for example *ScriptRunExperiment1.m*
- If you need to save and load variables, use functions that do the reading and saving and return only the relevant variables.

4 Variables

- Variable names start with a lower case later.
- The name must only contain nouns and adjectives.
- Each additional word must start with a capital letter without any punctuation.
- Good examples: `index`, `leftChild`, `numberOfLeaves`.
- Bad examples: `Index`, `bringLeftChild`, `number_of_leaves`.
- Global variables are not to be used! one can instead create functions returning the wanted value and call those functions from various places in the code.
- Static variables are encouraged. (make sure you use them correctly)

5 More

There is much more but this is the basic stuff.