

Awesome MATLAB notebook

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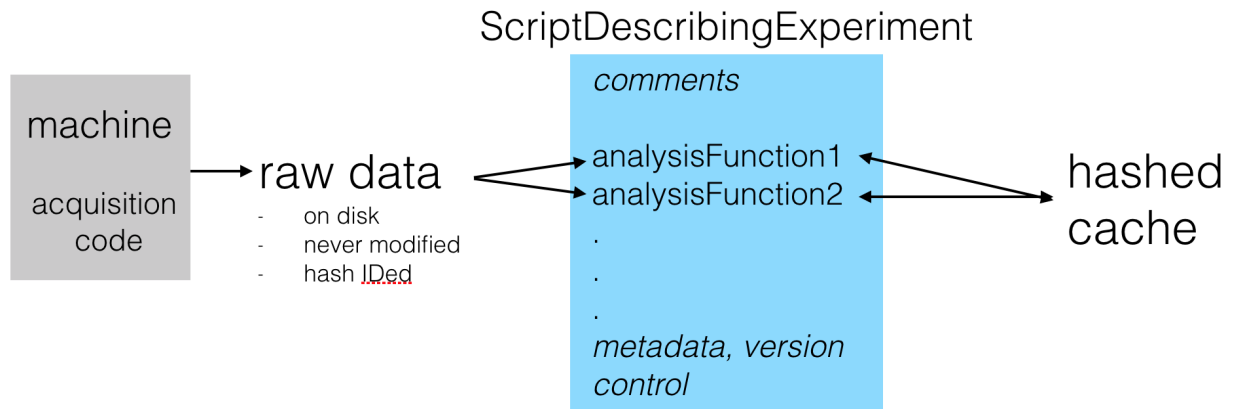
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Philosophy

The point of this document is to document **my** way of generating self-documenting code and beautiful and accurate visualizations of data. Before I tell you what my workflow is, here is a strawman example of how a real scientist used to organise and name their code:

```
>> ls *.m
analysis.m          analysis_final.m    analysis_final_temp.m
```

This is clearly a terrible way to do things. Here is how I do this:



This workflow has many advantages:

1. **One Script from raw data to finalised PDF.** The ideal situation (for me) is if scientists free not only their code but also their data. The act of publishing then would entail people making all their raw data available, with scripts that operate on this raw data and make the final figures in their papers (or, even better, the whole paper).
2. Automatic version control of code and PDFs. Every PDF can be uniquely identified to a point in your git history, and every PDF ever generated can be regenerated at any time. This also means that you can precisely know which code was used to generate which figure.
3. hashed cache means quick builds of PDFs
4. Your paper writes itself

5. Publication-quality figures

There are some downsides to this:

1. No interactivity (like Mathematica's `Manipulate`)
2. No movies in final PDF (but you don't have movies in papers either)
3. Need to re-compile PDF when you change your code

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