Psych Head Documentation

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Contents

This project has been developed within the Action and Perception group of the school of Psychology at Cardiff University. A new audiovisual lab has been created and needed a bit of code in order to be analyse the data provided by the measurements and simulations. [Octave][1] has been chosen for several reasons:

- Open source software

- Good compatibility with Matlab (used inside the Lab)

- Good toolboxes for signal processing

Please, download it, study it, improve it and share it!

Installation

At the moment, even if the library isn't a proper package, the installation process is straight forward. Clone the repository or extract the archive in your home directory *~/* (or wherever it suits you best) and edit the *~/Octaverc* file by adding the following line:

```
addpath('<directory/where/are/stored/the/files>')
```

This will load the library at startup.

Psych Head API

The package include several functions that are distributed along a certain architecture.

Analysis

This part is related to data analysis and plotting such as psychometric functions, p50's and Probit analysis.

ComputePsychFunc Compute the psychometric function for one parameter based on a 2AFC. The parameters has to be the first column. The answer on the second column.

```
[param good_ans_perc] = ComputePsychFunc(data, answer_comp)
```

LauraPlot Plot the psychometric function for the intensity experiment.

```
[figure_handle p50] = LauraPlot(filename)
```

ProbitFit Curve fitting using a probit analysis.

```
[fitlogsignal, prob_perc, p50, logsignal, n, p75, p84, chi_sq, rsq, D] = ProbitFit(signal, pcCorrent,
```

ProbitStripped Curve fitting using a probit analysis with a less verbose output.

```
[figure, p50, p75, p84, ch_sq, Rsq, D] = ProbitStripped(signal, pcCorrect, numstim, isPlot, asymptote
```