

# Introduction to Matlab

Big exercise

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## Exercise

The exercise is as follows: import the data from the Data file. Calculate the reaction time for the initial decision and the re-decision, for each subject and each trial. It is by parts: first, with a single subject, a single trial. Then, if there is time, expand to more trials and eventually to more subjects.

1. Create data with the GetData function. Save the data for the first subject, first trial into a different set of variables and use those for the rest of this exercise.
2. Plot this data using the plot command.
3. Find the time  $t_{ic}$  at which the input changes.
4. Find the decision time, defined as the time in which the decision variable gets within a threshold (we'll use 0.4 in this case) of the right choice.
5. Find the re-decision reaction time, defined as the time that passes between the input change and the re-decision time. That is, if the input change was at  $t_{ic}$  and the re-decision happened at  $t_{rd}$ , then the re-decision reaction time is  $t_{rdrt} = t_{rd} - t_{ic}$ .
6. For this subject, find out if the decision time is bigger than the re-decision reaction time. If so, display something to this effect (e.g. For this subject, the re-decision time was greater than...).