# **Brainhack Proceedings**

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Warning: Brainhack Proceedings are at an alpha stage of development, and do not yet welcome submissions.

Please follow the updates from the Brainhack website, @brainhackorg Twitter account, Brainhack Proceedings Mattermost channel.

Brainhack proceedings are ...

#### How to submit to Brainhack Proceedings

#### 1.1 Submission guidelines for authors.

To create a paper for your project, simply follow the instructions in the Brainhack Proceedings template. It will take you through all the steps up to the submission based on a rich template that you can easily adapt to the needs of your paper. Once your paper is ready, you can submit it by creating an issue in this repository, using the "Submission" template, and fill in all the information.

- Our team will fork your repository on https://github.com/brainhack-proceedings/ your\_paper\_id.
- We will configure a new github page, and make the paper information and pdf available on https:// brainhack-proceedings.github.io/your\_paper\_id. The page will be refreshed every time a new version of the paper is released (revision1, revision2, etc).
- A review issue will be opened on the fork, inviting some reviewers.
- Reviewers will create issues. You will need to submit pull requests to address these issues. The editor will close each issue after reviewing they have been properly addressed.
- After all issues have been addressed, a "publish" release will be made by the editor.
- All versions of the paper will be posted on https://brainhack-proceedings.github.io right after the initial submission.

#### 1.2 Who are the Authors?

- Authors are considered as any active local or remote contributors to the project at the time of the project developed and finalised, who had a substantial contribution to the project, not only during the time of the project development taken place for a limited time of the Brainhack but until the project has been finalised or came to a stage to publish the results.
- The project leaders are to decide who should be getting credit as being the co-author.

- The co-authors' consent to be listed should be taken before they are administrated as the co-authors with the publication.
- The consent should guarantee of the co-authors should be ready to take the responsibilities regarding the any queries and support for the publication.
- Purely financial contributors should not be considered as co-authors but considered as funding supports and needs to be acknowledged at the Acknowledgement section of the paper as necessary.

#### 1.3 Scope

Brainhack proceedings welcomes submissions along the following tracks:

- · Brainhack Global
- Standalone Brainhack Events
- OHBM Hackathons
- BrainWeb Hackathons
- Neurohackademy
- Worldwide Brainhack Schools (e.g. MTL Brainhack School)

#### 1.4 Format

We recommend proceedings to remain under two pages.

#### 1.5 How are submissions reviewed?

Please read our review guidelines for more information.

#### 1.6 How to submit?

- Create a public account on GitHub.
- Go to Brainhack Proceedings Template repository.
- Follow the instructions given in the repository README to create a copy of the template repository at your own local, and edit as necessary.
- Create an issue in this repository, using the "Submission" template, and fill in all the information.
- Our team will fork your repository on https://github.com/brainhack-proceedings/ your\_paper\_id.
- We will configure a new github page, and make the paper information and pdf available on https:// brainhack-proceedings.github.io/your\_paper\_id. The page will be refreshed every time a new version of the paper is released (revision1, revision2, etc).
- A review issue will be opened on the fork, inviting some reviewers.
- Reviewers will create issues. You will need to submit pull requests to address these issues.

- The editor will close each review issue after reviewing they advised was properly addressed.
- After all issues have been addressed, a "publish" release will be made by the editor.
- All versions of the paper will be posted on https://brainhack-proceedings.github.io right after the initial submission.
- Make sure that you archieve your repository in Zenodoor Figshare together with your submission to Brainhack Proceedings. Doing so, you will get a Digital Object Identifier (DOI) for your repository while providing a time-free representation to your paper and associated code repositories.

#### 1.7 Examples of Brainhack proceedings

The examples from the previous years' Brainhack Proceedings can be found in Proceedings menu of the Brainhack webpage

### **1.8 Attribution**

Some material in this section was adapted from the Neurolibre publication guidelines, released under an MIT license.

#### Brainhack Paper Guideline

Here you are provided a quick guideline to help you addressing the scientific question and the research is done in your paper in a well and simply formatted way.

Not all of the items listed here are the absolute requisities to pass the review processes but they are important points to take into consideration for including in your paper for the clarity and sanity of the research conveyed and to make it easy to be understood by the public.

So please use this guideline as a matter of checklist regarding your preprint.

#### 2.1 Project Information

#### 2.1.1 Title (required)

Provide the working title of your project. It may be the same title that you submit for publication of your final manuscript, but it is not a requirement.

**Extra info:** The title should be a specific and informative description of a project. Vague titles such as "Brainhack preprint plan" are not appropriate.

#### 2.2 Authors (required)

List all the project attendees that are associated with any part of the project run from the first day of the Brainhack until the latest day of the registration.

#### 2.3 Abstract (required)

• Please give a brief description of your study, including some background, the purpose of the study, or broad research questions.

- If the project is based on a study, please clearly declare the hypothesis.
- Give the open-access link (Git-based repository, OSF preprint) of the repository where the tool developed and the material produced associated with the project.

**Extra info:** The description should be no longer than the length of a short paragraph. It can give some context for the proposed project, but great detail is not needed here for your preprint.

### 2.4 Keywords (required)

Indicate the keywords related to the project

### 2.5 Introduction (required)

- Give a brief literature review based on the work that has been done in the field.
- List specific and concise aims and necessities of the project; in other words, the fulfilled milestones pre-specified in your project pitch aiming for a diverse aiming diverse and non-specialist audience.
- Give an overview of the work that has been done throughout the project.
- Indicate how the project would benefit the neuroscience society (i.e. implications of the project).
- Give a link to the open platform(s) where the project materials is (are) listed and stored along with the explanation of how they can be accessed.

#### 2.6 Methods

- Software Tool Development Based Projects.
- Explain how/which way already existing tools/hardware are employed in the development of the project.
- List the details of the specific functionalities of the developed tool.
- Explain how this tool can facilitate user experiences.
- Please indicate all the necessary cross-references (e.g. using the format of [dataset] Authors; Year; Dataset title; Data repository or archive; Version (if any); Persistent identifier (e.g. DOI) or the publisher's format) to reference the data used in your project. If you had to create or acquire a new dataset for your project, please make it publicly and openly available, and provide a means so that it can be cross-referenced.
- Explain the reason for the choice of the data, what the data includes, from which repository (provide URL, identifier or accession code to help others to access the data for reproducibility purposes) and indicate the related taken permissions and ethics applies to the data. If the data is a restricted use only and you have specific permissions to use, please indicate the legal and ethical reason for the restriction, and provide a link to the organization/group/publication the data is taken from.
- In some cases the publisher of the data might not be willing to accept the citation to the data, in such cases cite the publication/paper that uses and explains the data, its collection etc.
- In case you use existing data to test the tool, please describe and explain the steps you have taken to assure that you are unaware of any patterns or summary statistics in the data. This may include an explanation of how access to the data has been limited, who has observed the data, or how you have avoided observing any analysis of the specific data you will use in your study.
- Indicate every processing applied to the data (e.g. preprocessing, dimensionality reduction, thresholding, etc.).

• If you will collect a new data set to test and/or validate the tool, please adhere to section 5.3.

#### 2.6.1 Guideline/Workflow Development Based Projects

- Indicate the purpose of the to-be-achieved guideline/workflow.
- Specify the target community and describe to which pipeline or the tool will contribute and how it will facilitate the use of that pipeline.
- Address how this tool will be helpful to the target community.
- Describe the plan for dissemination of the use of the tool by the widespread communities.

#### 2.6.2 Study Based Projects

- Please indicate your hypothesis regarding the study.
- If the study involves human/non-human subjects indicate the related ethics application details.
- If the study involves human subjects explain how the subjects were informed about the study details and their consent are taken.
- If the study involves human subjects indicate how the subject data will be secured and stored.
- Explain the study design including the groups and measures (repeated, factorial, two-group, randomized). Is it a between (unpaired, paired), within-subject (paired), or mixed design? Describe any counterbalancing required. Typical study designs for observation studies include cohort, cross-sectional, and case-control studies.
- Example: We have a within-subject design, with one-factor accuracy (two levels: accurately cued / inaccurately cued trials).

**More info:** This question has a variety of possible answers. The key is for a researcher to be as detailed as is necessary given the specifics of their design. Be careful to determine if every parameter has been specified in the description of the study design. There may be some overlap between this question and the following questions. That is OK, as long as sufficient detail is given in one of the areas to provide all of the requested information. For example, if the study design describes a complete factorial, 2x3 design and the treatments and levels are specified previously, you do not have to repeat that information.

- Please describe the process by which you will collect your data. If you are using human subjects, this should include the population from which you obtain subjects, recruitment efforts, payment for participation, how subjects will be selected for eligibility from the initial pool (e.g. inclusion and exclusion rules), and data collection timeline.
- Justify and identify the sample size of your study. How many units will be analyzed in the study?
- Describe each variable that you will measure.
- Please list all the basic steps of your preprocessing.
- Please briefly explain how the preprocessing of the data will be held? (methods, tools, pipeline etc.)
- · Please briefly explain how you will analyze the data.
- What statistical model will you use to test each hypothesis?
- How will you determine what data or samples, if any, to exclude from your analyses? How will outliers be handled? Will you use any awareness check? Is there a minimum number of trials participants should contribute to the analysis?
- How will you deal with incomplete or missing data?

#### 2.7 Progress (required)

- The process completed before Brainhack Explain the work has been completed before the hacking.
- The process completed throughout Brainhack Explain the work has been completed during the hacking period.
- The process completed after Brainhack Explain the work has been completed during the hacking period.

#### 2.8 Results (required)

- · Explain the main results of the project/collaborative work.
- Include figures that would help with the explanation of the tool developed.

#### 2.9 Implications and Future Directions

- List the implications the project comes with the current version with the main reasons behind them.
- List the ideas regarding the solutions towards overcoming the implications.
- List the future directions and plans regarding the tool developed and how these future plans are aimed to be achieved.

#### 2.10 Conclusion

- Summarise the aim of the project and the achieved success/work done by the submission of the registration form.
- Highlight the main facilitation the tool brings to the neuroscience and open science community.

#### 2.11 Acknowledgment

• Indicate the additional information regarding the contributions outside the project attendees. If any of the instructors provided the necessary guidance for the project to be successful and is not listed in the authors, acknowledge them.

#### 2.12 Ethics and Security

###Collected Data

- Indicate the ethics application/process regarding the data collection processes.
- Indicate how the data collected will be stored in a safe and secure way.
- Indicate under which agreement data sharing is agreed and approved across the parties attended to the development of the project.

#### 2.12.1 Existing Data

- Briefly describe where the data is obtained.
- Briefly describe how the data has been collected.
- Briefly describe how the data has been anonymized.

#### 2.13 Author Contributions

• List the author's initials and their contributions to the project. This section is for the identification of the specific role(s) of the authors throughout the project.

#### 2.14 Conflict of Interest

- Declare whether there is any conflict of interest with the authors and the project. Acknowledgement
- Indicate/list the funding, grants, data or resources that were provided by a third party company/funding agency/research body that facilitated and supported the proposed study.

#### 2.15 References

• List the references used in the preprint.

#### 2.16 Appendix/Notes

• Any additional documentation, supporting materials that has to be listed with the publications or needs to be addressed for further details that is stored in the repository should be listed with their direct links in this appendix section.

#### **Reviewer** guidelines

#### 3.1 Contributing as a Reviewer

Brainhack Proceedings are run through a pool of volunteering reviewers, who have the field knowledge and experience to review the papers submitted throughout the year. The reviewer applications run through a simple submission form and the approval is done by the editorial team of the Brainhack Proceedings. Based on the field of knowledge you indicate in your application, the submitted abstracts are assigned to you by the editors and issued into the system to track the reviewing processes.

#### 3.2 Paper - Reviewer Assignment Processes

Brainhack proceedings will have a list of editors, who will take an active work in the paper-reviewer assignment and track workflow. The editor team will ask the pool of reviewers to collect their interest in reviewing the papers at hand. Based on the interests, and if there will be no declaration of *conflict of interest*, the reviewer will agree with the reviewer. The Editor will open a review issue on the associated paper's repo and the agreed reviewers will be tagged for that issue. Each reviewer will have direct contact with the editor in the case of any request and help.

#### 3.3 Main Responsibilities

As a Brainhack proceedings reviewer, you are responsible for the technical quality of the resources available for our community. Prior to the review, an editor establishes that the submission qualifies in principles, and an administrator has built a pdf for the initial submission, which gets listed on the brainhack proceedings website as a preprint, so you can review the material directly on the pdf (the link is at the top of the Github page of the article). Now your role is to ensure the submitted materials take full advantage of the proceedings format, prior to final publication. Specific criteria for review are listed below.

#### 3.4 Scientific review criteria

You need to assess that work is scientifically sound, including but not limited to the following:

- Are the objectives and hypothesis of the work clearly stated? - Is the context of the work clearly presented?/ - Are key prior works on the subject properly cited? - Are the methods sound? - Are the results presented clearly? - Are the conclusions supported by the results?

#### 3.5 Technical review criteria

You may want to go through some examples of high-quality proceedings from past years from the Proceedings menu of the Brainhack website

Specific areas for review include: - Is the text clear and easy to read? In particular, are the sentences free of jargon? - Are the figures properly annotated and help understand the flow of the proceedings? - Is the article of appropriate lengths? We recommend up to two pages, but this can be adapted based on the project. - Is the article split into logical sections? - Is the data used for the research clearly explained and cited (if it is previously collected/open data)?

#### 3.6 Data, code, and notebooks

Wherever appropriate, authors should share supporting data, code, and notebooks for their work. Note that you are not expected to formally review data, code libraries, and notebooks shipped with the article. There are other publication venues better suited for this kind of review, such as the Nature scientific data, Journal of Open Source Software and Neurolibre, respectively.

#### 3.7 How to interact with authors

We encourage you to open as many issues as necessary to reach a high quality for the submission. For this purpose, you will use the GitHub issue tracking system on the repository associated with the submission. Please assign the issues to the lead author of the submission, who will submit a pull request in order to address your comments. Review the pull request and merge it if you think it is appropriate. You can also submit a pull request yourself and ask the author to approve the changes. If you encounter flaws or conflict with the results, please give constructive feedback regarding how the research should be improved. Please avoid any personal comments that might direct to the author, but keep the focus on the content, research, and the scientific question aimed at and follow our code of conduct.

When you have completed your review, please leave a comment in the review issue saying so. You can include in your review links to any new issues that you, the reviewer believe to be impeding the acceptance of the repository.

#### 3.8 How to interact with editors and Brainhack Proceedings Admin

You can tag the editors in any of your issues. If you need to communicate privately with an editor, you can use direct messages on the Mattermost Brainhack channel. You can also post your questions in the Brainhack Proceedigns Reviewers channel if you want the entire Brainhack reviewer community to help. Just be mindful that authors of the submission have potential access to this channel as well.

#### 3.9 Conflict of interest

The definition of a conflict of interest in peer review is a circumstance that makes you "unable to make an impartial scientific judgment or evaluation." (please look at PNAS Competing Interest Policy). The Brainhack team is concerned with avoiding any actual conflicts of interest, and being sufficiently transparent that we avoid the appearance of conflicts of interest as well.

As a reviewer, conflict of interest is your present or previous association with any authors of a submission: recent (past four years) collaborators in funded research or work that is published; and lifetime for the family members, business partners, and thesis student/advisor or mentor. In addition, your recent (past year) association with the same organization of a submitter is a COI, for example, being employed at the same institution.

If you have a conflict of interest with a submission, you should disclose the specific reason to the submissions' editor. This may lead to you not being able to review the submission, but some conflicts may be recorded and then waived, and if you think you are able to make an impartial assessment of the work, you should request that the conflict be waived. For example, if you and a submitter were two of 2000 authors of a high energy physics paper but did not actually collaborate. Or if you and a submitter worked together 6 years ago, but due to delays in the publishing industry, a paper from that collaboration with both of you as authors was published 2 years ago. Or if you and a submitter are both employed by the same very large organization but in different units without any knowledge of each other.

Declaring actual, perceived, and potential conflicts of interest are required under professional ethics. If in doubt: ask the editors.

#### 3.10 Attribution

Some material in this section was adapted from the "Journal of Open Source Software" reviewing guidelines, released under an MIT license, as well as the Neurolibre publication guidelines, also released under an MIT license.

#### Code of Conduct

A code of conduct is a set of rules outlining the social norms and rules and responsibilities of, or proper practices for, an individual, party or organization

#### 4.1 Summary

Brainhack Proceedings is dedicated to providing a harassment-free working environment for all, regardless of gender, sexual orientation, disability, physical appearance, body size, race, or religion. We do not tolerate harassment of any form. All communication should be appropriate for a professional audience including people of many different backgrounds.

Sexual language and imagery are not appropriate for any communication and/or talks. Be kind and do not insult or put down others. Behave professionally. Remember that harassment and sexist, racist, or exclusionary jokes are not appropriate for Brainhack Proceedings. Staff violating these rules should be reported to an appropriate line manager.

These are the values to which people in the Brainhack Proceedings community should aspire:

- · Be friendly and welcoming
- Be patient
  - Remember that people have varying communication styles and that not everyone is using their native language. (Meaning and tone can be lost in translation.)
- · Be thoughtful
  - Productive communication requires effort. Think about how your words will be interpreted.
  - Remember that sometimes it is best to refrain entirely from commenting.
- Be respectful
  - In particular, respect differences of opinion.
- Be charitable
  - Interpret the arguments of others in good faith, do not seek to disagree.

- When we do disagree, try to understand why.
- Avoid destructive behavior:
  - Derailing: stay on topic; if you want to talk about something else, start a new conversation.
  - Unconstructive criticism: don't merely decry the current state of affairs; offer—or at least solicit—suggestions as to how things may be improved.
  - Snarking (pithy, unproductive, sniping comments)
  - Discussing potentially offensive or sensitive issues; this all too often leads to unnecessary conflict.
  - Microaggressions: brief and commonplace verbal, behavioral and environmental indignities that communicate hostile, derogatory or negative slights and insults to a person or group.

People are complicated. You should expect to be misunderstood and to misunderstand others; when this inevitably occurs, resist the urge to be defensive or assign blame. Try not to take offense where no offense was intended. Give people the benefit of the doubt. Even if the intent was to provoke, do not rise to it. It is the responsibility of all parties to de-escalate conflict when it arises.

#### 4.2 Reporting an incident

Incidents that violate the Code of Conduct are extremely damaging to Brainhack Proceedings, and they will not be tolerated. The silver lining is that, in many cases, these incidents present a chance for the offenders, and the teams at large, to grow, learn, and become better.

The following should be handled by an editor who has been informed of the incident

You can contact editors privately through their emails (see their Github page for links), or using direct messages on the Mattermost Brainhack forum if you have any question, comment or complaint. The important information to gather include the following:

- Name and team of the participant violating the code of conduct
- The repository in which the incident occurred
- The behavior that was in violation
- The issues featuring the behavior, if on a public issue, or a copy of private correspondences if other channels were used
- The circumstances surrounding the incident
- · Other people involved in the incident

#### 4.3 Attribution

This Code of Conduct was adapted from both Golang and the Golang UK Conference.