FAIR_bioinfo : Open Science and FAIR principles in a bioinformatics project

How to make a bioinformatics project more reproducible

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IFB 2021

General information

Practical information:

- Dates: June 28th 30th
- Location: Institut des Systèmes Complexes, 113 rue Nationale, 75013-Paris
- Courses: 9:00 to 17:30
- Meal: 12:30-14:00
- Pauses: 10:30-11:00 + 15:30-16:00
- 2 days of courses + 1 day of course building

Round table:

- Teachers
- Learners

Ressources:



- GitLab
- PLEX



Training schedule

Day 1:

- Introduction to reproducibility
- History management (3 Practical Sessions, ♦git, ☐GitHub)
- Control your development environment (1 PS, CONDA)

Day 2:

- Traceability with notebooks (2 PS, ♥, ♥)
- IFB resources (2 PS, sum, S)
- Sharing and disseminating (GitHub, Zeroco)
- Conclusion

Day 3:

• Empowerment and improvement of resources



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- 3 Control your development environment

- 4 Workflow
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- Sharing and dissemination
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- 9 3rd Day





Use cases





Reproducibility - how far and for what?













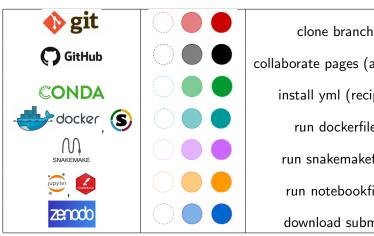
nbis-reproducible-research.readthedocs.io/en/latest



Reproducibility tools

Coloured dots: symbolise tools

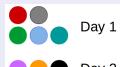
Variable intensities: according to expertise not needed, basic use, advanced use (expert)



collaborate pages (actions) install yml (recipe) run dockerfile run snakemakefile run notebookfile download submit

Use cases

What we learned during the courses



Day 1: Git (advanced), Github (basic), conda (advanced), zenodo (basic), docker (advanced)
Day 2: snakemake (advanced), jupyter (advanced), github (advanced)

Brainstorming

Choose coloured dots for tools to represent:

- Daily use
- Share an analysis with colleagues or your supervisor (they may want to perform)
- A part of the material and method for a publication

