

From dev to prod

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nf-core

ANF - workflow et reproductibilité

2025-11-25..27



The Challenge of Reproducibility

Hidden reproducibility issues are like an iceberg



First, we tried to re-run the analysis with the code and data provided by the authors.

Second, we reimplemented the whole method in a Python package...



Experimenting with reproducibility:
a case study of robustness in bioinformatics
<https://doi.org/10.1093/gigascience/giy077>

The five pillars of computational reproducibility:
bioinformatics and beyond
<https://doi.org/10.1093/bib/bbad375>



small nextflow, BIG NEXTFLOW

The image is a screenshot of a presentation slide for the Nextflow Summit 2024. The slide has a dark blue background. At the top left, the text "X SUMMIT 2024" is displayed in white. At the top right, the text "Barcelona, Oct 28-Nov 1, 2024" is displayed in blue. The central part of the slide features a large graphic consisting of a small green "X" logo on the left, a horizontal double-headed arrow in the middle, and a large green "X" logo on the right. In the bottom left corner of the slide, there is a small logo for the University of Liverpool. On the right side of the slide, there is a video inset showing a man with a beard and a white shirt speaking at a podium. The podium has a sign that says "nextflow SUMMIT Barcelona 2024". At the bottom of the slide, there is a row of logos for various sponsors: Seqera, AWS, ZS, Nanopore, Pixelgen, Ardigen, Element Biosciences, NVIDIA, and Quilt.

X SUMMIT 2024

Barcelona, Oct 28-Nov 1, 2024

nextflow SUMMIT
Barcelona 2024

seqera aws ZS NANOPORE PIXELGEN Ardigen Element Biosciences NVIDIA Quilt

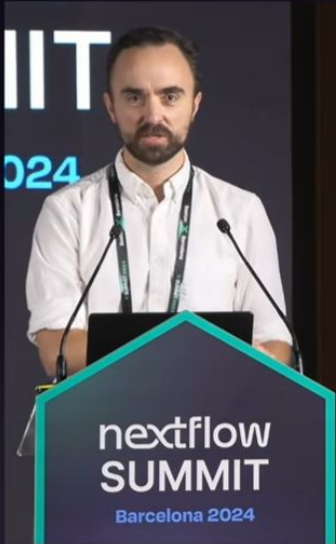


<https://youtu.be/nE566p1JIP8?si=mrF75iTQpV95eTiX&t=277>

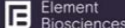
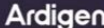
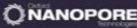
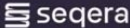
small nextflow, BIG NEXTFLOW

✕ SUMMIT 2024

Barcelona, Oct 28-Nov 1, 2024



✓ Subworkflows	✓ nf-core template
✓ Conda definitions	✓ iGenomes references
✓ Singularity containers	✓ Linting configuration
✓ Reusable modules	✓ Schema validation
✓ Contribution guidelines	✓ Cleanup (nf-boost)
✓ Process labels	✓ Institutional config
✓ Nested configuration	✓ External documentation
✓ Tested components	✓ Devcontainer setup
✓ CI/CD	✓ Custom functions
✓ Seqera Platform reports	✓ Seqera Platform reports
✓ Parameter schema	✓ Extensive ext.* usage





<https://youtu.be/nE566p1JIP8?si=mrF75iTQpV95eTiX&t=277>

nf-core



What does Maxime do before a release?

No need to do everything

- Subway map
- Logos
- Stickers
- CHANGELOG
- Acknowledgements
- nf-test
- megatests
- Checking all PRs
- Codename
- Release note
- Social media
- nf-core linting
- Code linting
- Code comments
- Code quality
- Documentation
- Issues
- Slack
- Announcements
- Cake



