

What academic bioinformatics could learn from startups?

Academic biology strives to perform the best research possible. Thirty years ago, it created a foundation for modern-day bioinformatics. But today academic biology suffers a reproducibility crisis. Letters and papers are regularly published in high-impact journals about reproducibility crisis,... and nothing changes. Poor scientific software is considered one of the major causes of the crisis.

From a startup perspective, any academic bioinformatics environments look outdated and generally wrong. CI/CD, shared codebase, code review, Agile, and orientation to the product are seen as necessary to just survive in the startup world. At the same time, these concepts are completely unheard of or even opposed in most of the academic places. Why is it so and what can we do about it? Do we *really* want reproducible research, or do we only want to grumble about it?

The discussion will:

- Start with discussing the experiences of the participants,
- Analyze a trade-off between the benefits and the costs of reproducibility, and how it affects research,
- Compare the benefits of teamwork with the academic “single researcher” mentality, and check how it affects RSE’s outcome,
- Discuss infrastructure and management problems,
- Summarize potential solutions.

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