THE UNIVERSITY OF CHICAGO DATA SCIENCE INSTITUTE

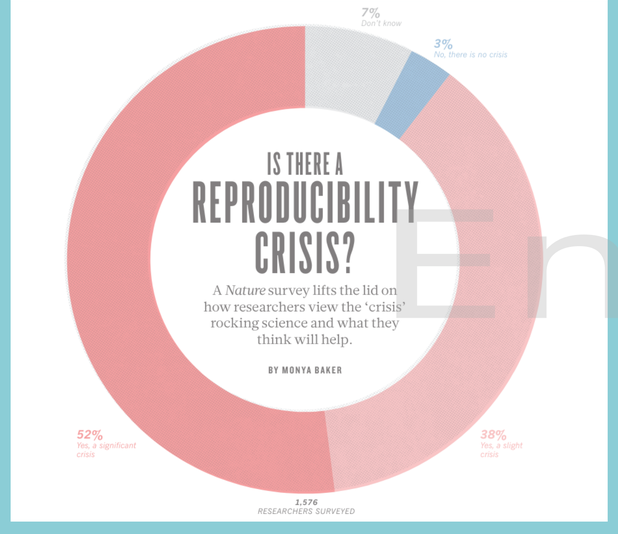
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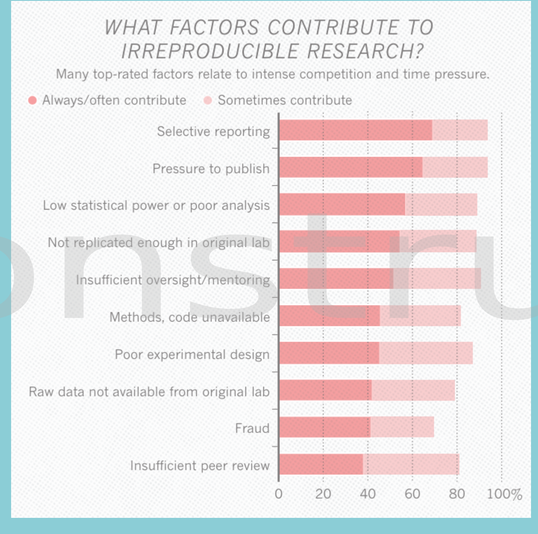
AI+Science Summer School
July 15-19, 2024

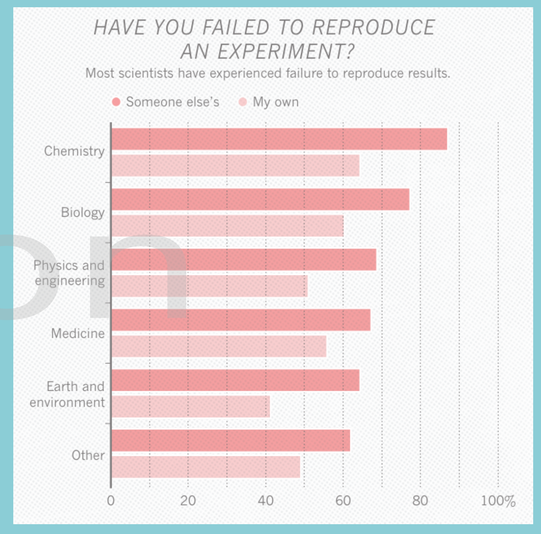
Leveraging the power of AI
to improve replicability, reproducibility, and transparency in phylogenetic comparative biology

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The pursuit of scientific knowledge is a journey punctuated by occasional “Eureka” moments that can shape and transform our understanding of the world. Ensuring the reliability of these discoveries is paramount to maintaining credibility in science.





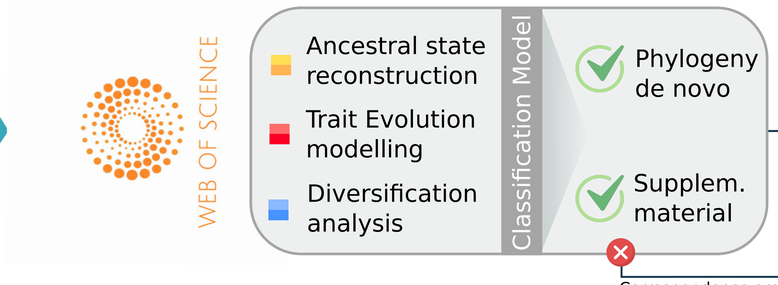


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What will we do?

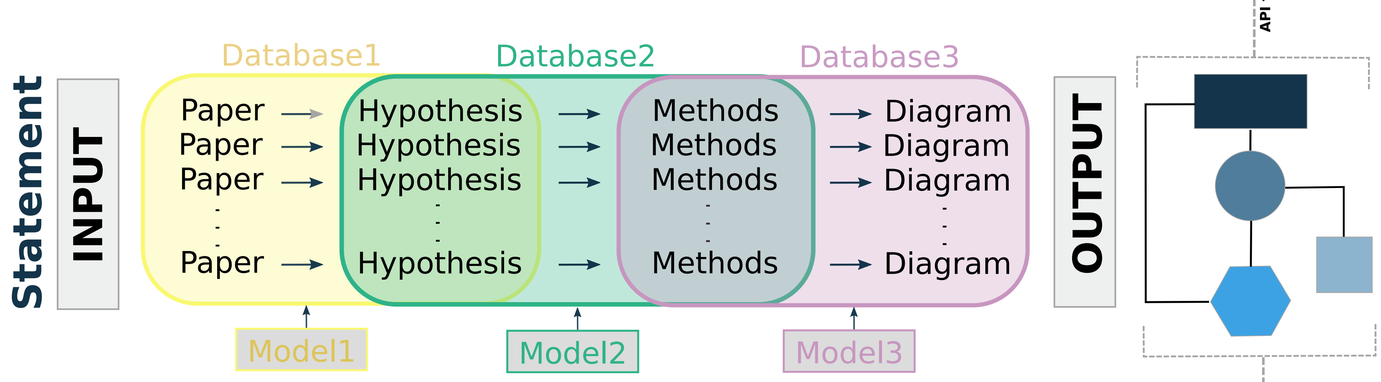
Quantifying reproducibility

Quantify reproducibility in phylogenetic comparative biology.



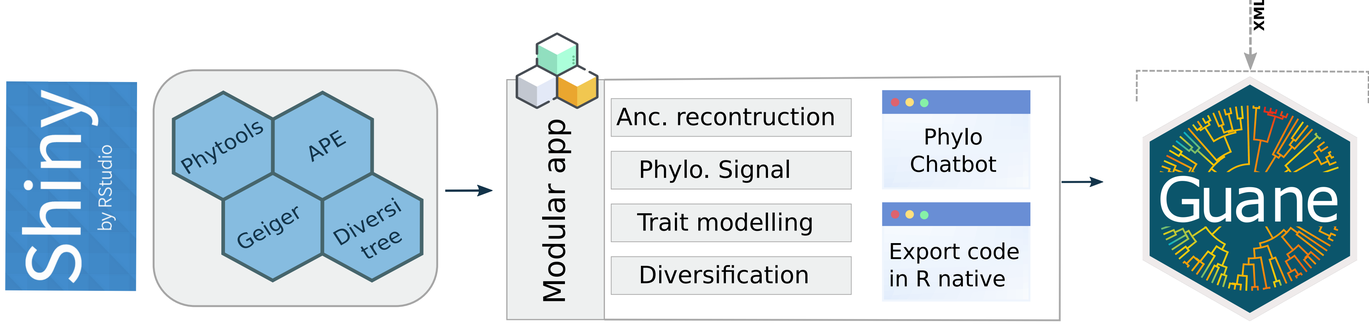
Intelligent Asistant

Create a new intelligent assistant that helps users develop hypothesis driven computational workflows for their analysis and allow pre-registration.



Guane: a PCB Analytic tool

Develop a user friendly interface that recognizes pre-registered schemes, undertakes the planned analysis,and generates a commented analysis code.



EXPECTED RESULTS

- The first rigorous meta-scientific study of reproducibility in phylogenetic comparative biology
- Friendly software to analysis in phylogenetic comparative biology could help to smooth the learning curve of those methods.
- Design software that include multilingual interfaces and frienly and blind-color palettes, is a way to to democratize knowledge in science.

IMPACT

By promoting best practices and accelerating AI adoption, my project has the potential to not only enhance the reliability of evolutionary research but also set a precedent for other scientific disciplines to follow.

Data, Software and Ethics Policy

- We will pre-register the analysis
- Analysis code will be available for general use under an MIT license The code for the new platforms generated
- There will be free and open-source under the GNU General Public License v3.0