

TOOLS FOR CAUSAL AI

USE OF RELEVANT DATASETS & PACKAGES



REFERENCES

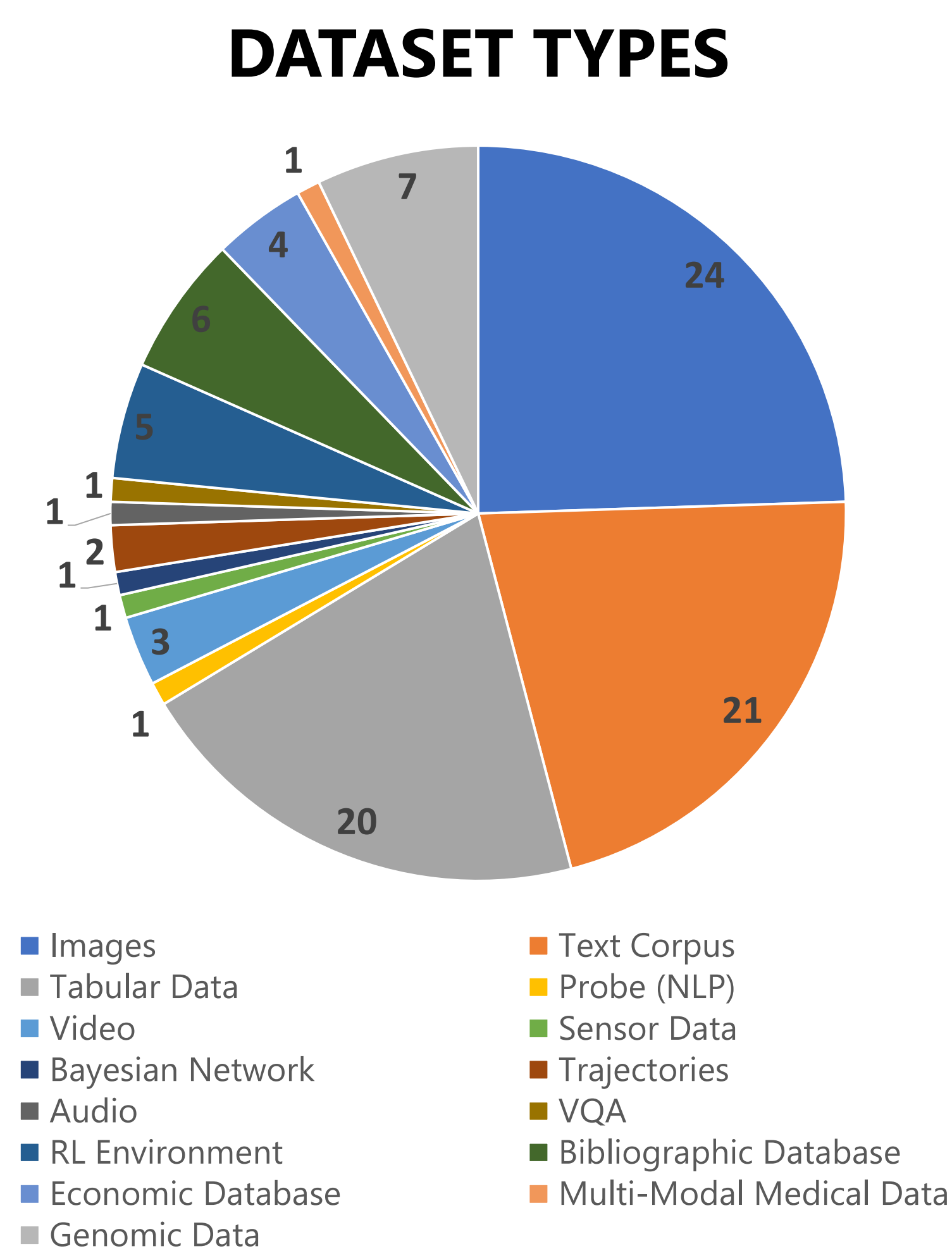
[1] Niloy Ganguly, **Dren Fazlija**, Maryam Bader, Marco Fisichella, Sandipan Sikdar, Johanna Schrader, Jonas Wallat, Koustav Rudra, Manolis Koubarakis, Gourab K. Patro, Wadhah Zai El Amri, Wolfgang Nejdl (2023). **A Review of the Role of Causality in Developing Trustworthy AI Systems**. *arXiv preprint arXiv:2302.06975*.

IN A NUTSHELL

- Only a few Causal AI papers from [1] use established datasets and packages
- Makes comparisons to other, non-causal methods very difficult
- In some areas, Causal AI is only used for a limited collection of data types
- In other fields, Causal AI publications do not employ any existing benchmark platform
- We outline popular Causal AI and traditional tools for different applications of Causality

METHODOLOGY

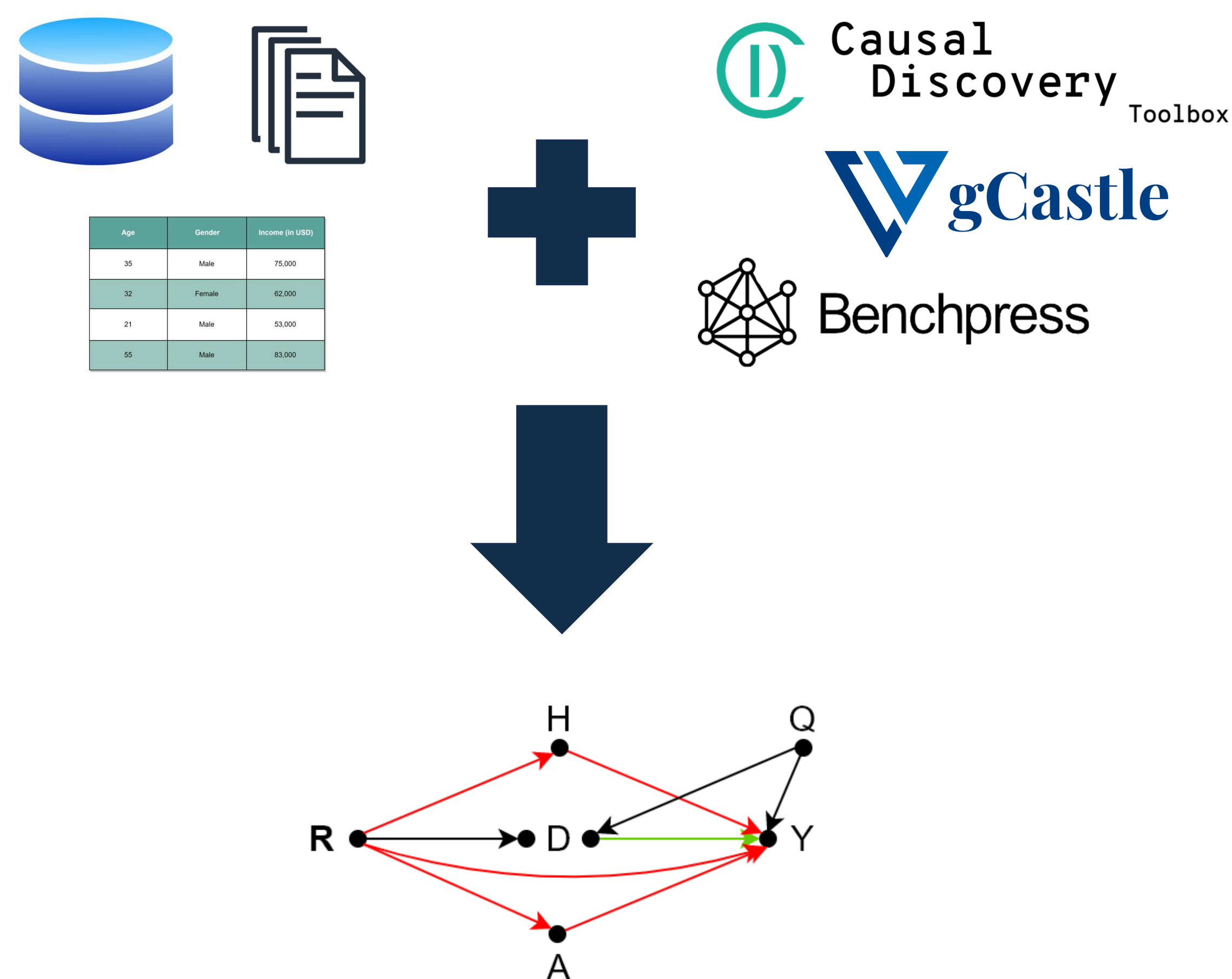
- We analyzed 98 freely available real-world datasets outlined in [1]
- We investigated five aspects of Trustworthy AI: interpretability, fairness, robustness, privacy, and safety/accountability
- We also analyzed datasets and packages for the healthcare domain
- All recommended tools are prevalent in their respective area and are continuously maintained



Domain	Dataset Type
Interpretability	Text Corpus
Fairness	Tabular Data
Robustness	Images
Privacy	Images
Safety/Accountability	Publication Databases
Healthcare	Genomic Data

FURTHER RECOMMENDATIONS

USE EXISTING CAUSALITY TOOLS



COMPETE WITH NON-CAUSAL METHODS



Special thanks to our colleague **Alina Nekrasova** for designing this great figure!



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