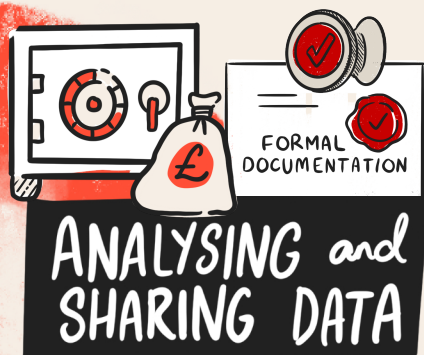


EMERGING+ COMPUTATIONAL

PLANNING and DEVELOPING RESEARCH

Clarify software environments, programming languages, frameworks, computational dependencies, and hardware requirements to support later **computational reproducibility**.

If artificial intelligence or machine learning models are involved, reflect at the planning stage on transparency, bias, explainability, training data sources, and responsible innovation principles.



ANALYSING and SHARING DATA

Document modelling assumptions, parameter choices, **evaluation metrics**, validation procedures, and performance boundaries to **support interpretability**.

Share code repositories, computational notebooks, or container configurations to enable verification and reuse.



Where feasible, document whether computational results have been **independently verified or reproduced**.



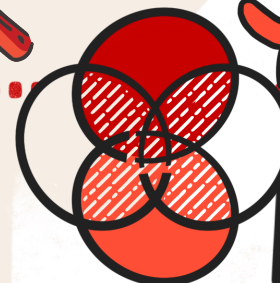
Where machine learning models are developed, document **training data** characteristics, model **limitations**, potential biases, and **appropriate use contexts**.

Where third-party datasets, APIs, or platform-derived data are used, **document licensing conditions**, reuse permissions, and terms of service.

If the research may generate **models**, algorithms, software tools, or computational frameworks with potential for wider use, clarify at the outset how these may be documented, licensed, and **shared responsibly**.



Maintain **version-controlled repositories** for scripts, models, and workflows to support **transparency** and **traceability**.



Deposit software tools, scripts, models, or workflows in appropriate **repositories** to enhance **discoverability** and **long-term access**.



CONDUCTING RESEARCH and ACQUIRING DATA

Document **preprocessing**, data cleaning, **transformation**, feature engineering, and model training steps clearly and systematically.

Where automated data collection or scraping is used, document **collection parameters**, timestamps, and contextual conditions.



DISSEMINATING and PUBLISHING RESEARCH

Where licensing, commercialisation, or intellectual property considerations apply, coordinate **dissemination** decisions with **institutional teams**.

