Al-Powered DMP Assessment for Efficient Research Data Management

Project idea

This project explores how AI can improve data management by making DMPs more dynamic, efficient, and reproducible. We examine how much human oversight remains necessary as AI takes on more planning tasks.

Focus: We build Al tools for researchers, stewards, and funders, using analytics and language models to improve DMPs. We also explore digital objects, ontologies, and data spaces in research.

Use Cases: Al supports updating DMPs during the research lifecycle, checking compliance with standards, aiding ethical reviews, and offering coaching for stewardship and reproducibility.

Focus: Dimensions for DMP Assessment Project details **Project and Data** General description of the data Ethical and legal compliance Data Governance Documentation and metadata and Compliance Data management responsibilities and resources Storage and backup during the Data Handling research project and Sharing, publishing and archiving Lifecycle the data after the research project Our use case: DMPTuuli working group. (2021). Finnish DMP evaluation guidance. Zenodo. https://doi.org/10.5281/zenodo.4762326

The workflow of AI assisted DMP evaluation DMP feedback DMP manual DMP submission to Preparation of DMP Item & general DMP acceptance research support evaluation level Al based evaluation Consent to use Al for content & for evaluation recommended practices

Al performance result example: Domain 2 – Legal issues in data management

Summary: "While acknowledging the importance of GDPR compliance and consent for sensitive data, the DMP lacks comprehensive details on legal compliance and ethical issue management."

Rating: Satisfactory

Item	Question	Result (AI)	Explanation (AI)	Provide feedback on this domain
2.1.2 Legal requirements and ethical practices	Are the legal requirements and ethical practices that apply to the data processing identified?	Yes	The text identifies the GDPR as the legal requirement that applies to the data processing, showing awareness of legal and ethical practices.	Add your comments here
2.1.3 Compliance with legislation	If applicable, is there an explanation on how compliance with legislation will be ensured during the project?	Partial	While the text mentions the necessity to comply with GDPR due to the sensitive nature of the data, it does not provide specific details on how compliance will be ensured beyond obtaining consent.	Add your comments here
2.1.4 Ethical issues management	If applicable, are details provided on how ethical issues affecting data management will be addressed	No	The text does not provide details on how ethical issues affecting data management will be addressed, aside from general statements regarding compliance and consent.	Add your comments here

Unique features

- Customizable for Any Assessment Framework
- ❖ Built-In Data Privacy & Security by Design
- Integrated Support for Multiple Language Models
- Detailed, Transparent Scoring & Insights
- Private, Actionable Feedback for Researchers
- Domain-specific Feedback for Developers







