Here is the checklist generated based on the requirements:

Data Management Checklist

Data Management Requirements Capture

- Has the data management process identified objectives to be satisfied at the level of each individual data point?

  ○ Yes / No

- Have data collection, labelling (only in supervised learning), and preparation (pre-processing, data transformation, and feature engineering) been considered?

  ○ Yes / No

- Are the various datasets used in the learning phase (training, validation, and test datasets) identified?

  ○ Yes / No

Data Collection

- Has data been collected from multiple sources?

  ○ Yes / No

- Is the quality of the collected data ensured?

  ○ Yes / No

- Have data inconsistencies and errors been addressed?

  ○ Yes / No

Data Labelling (only in supervised learning)

- Are labels accurate and consistent?

  ○ Yes / No

- Has data labelling been conducted by multiple annotators to ensure consistency?

  ○ Yes / No

Data Preparation (pre-processing, data transformation, and feature engineering)

- Have data preprocessing techniques (e.g., normalization, scaling) been applied?

  ○ Yes / No

- Are features engineered to improve model performance?

○ Yes / No

- Has data transformation been conducted to handle missing values or outliers?

  ○ Yes / No

Data Set Verification

- Is the accuracy of the training, validation, and test datasets verified?

  ○ Yes / No

- Is the completeness of the datasets ensured?

  ○ Yes / No

- Is the representativeness of the datasets with respect to the ML requirements and AI/ML constituent ODD verified?

  ○ Yes / No

Independence Requirements between Data Sets

- Are the various datasets used in the learning phase independent of each other?

  ○ Yes / No

- Have steps been taken to ensure data independence (e.g., anonymization, encryption)?

  ○ Yes / No

Identification and Elimination of Unwanted Bias

- Has unwanted bias inherent to the datasets been identified?

  ○ Yes / No

- Have steps been taken to eliminate or mitigate bias (e.g., data preprocessing, feature engineering)?

  ○ Yes / No

Note: This checklist is generated based on the requirements provided and is intended for both the author developing the AI/ML software and the reviewer reviewing it.