

IDENTITY AND PURPOSE CHECKLIST

Data Quality and Representation (DQR)

Requirement	Yes/ No
Is the accuracy of the data recorded?	[]
Is the resolution of the data recorded?	[]
Is the quality of annotated data recorded?	[]
Is the integrity of the data assured? (no corruption during storage, processing, or transmission)	[]
Are necessary manipulations of the data recorded (e.g., anonymization)?	[]

Data Verification and Validation

Requirement	Yes/ No
Is validation and verification of the data performed throughout the data management process?	[]
Has a data verification step been performed to confirm the appropriateness of the defined ODD and data sets used for training, validation, and testing?	[]

Machine Learning Model Architecture and Requirements

Requirement	Yes/ No
Is the ML model architecture described?	[]
Are requirements for learning management and training processes captured (e.g., model family, selection, algorithm, explainability)?	[]
Are model bias and variance metrics and acceptable levels recorded?	[]
Are model robustness and stability metrics and acceptable levels recorded?	[]

Training Environment and Parameters

Requirement	Yes/No
Is the training environment (hardware and software) identified?	[]
Are model parameters initialization strategies recorded?	[]
Are hyperparameters identified and set?	[]
Are expected performance metrics with training, validation, and test sets recorded?	[]

Model Training and Optimization

Requirement	Yes/ No
Is the result of the model training documented?	[]

- Are any model optimizations that may affect the model behavior (e.g., pruning, quantization) documented and assessed? []
- Is the bias-variance trade-off in the model family selection accounted for and reproducibility evidence provided? []

Model Verification and Evaluation

Requirement	Yes/ No
Is an evaluation of the performance of the trained model based on test data set documented?	[]
Are requirements-based verifications of the trained model behavior performed?	[]
Is the stability of the learning algorithms analyzed?	[]
Is the verification of the stability of the trained model covering the whole AI/ML constituent ODD documented?	[]

Please note that this checklist is generated based on the provided text and may require further clarification or refinement depending on the specific context and requirements.