

Here is the checklist generated for the author and reviewer of the Artificial Intelligence-Machine Learning software:

Configuration Management (CM)

- Have you identified configuration items related to AI/ML constituent life-cycle data?
 - ☐ [] Yes
 - ☐ [] No
- Are versioning, baselining, change control, reproducibility, problem reporting, archiving and retrieval, and retention period applied to the AI/ML constituent life-cycle data?
 - ☐ [] Yes
 - ☐ [] No

Quality Assurance (QA)

- Have you ensured that quality/process assurance principles are applied to the development of the AI-based system with the required independence level?
 - ☐ [] Yes
 - ☐ [] No

Reuse of Trained ML Model (RU)

- Have you performed an impact assessment of the reuse of a trained ML model before incorporating it into an AI/ML constituent?
 - ☐ [] Yes
 - ☐ [] No
- Have you confirmed that the COTS ML model is adequate to the requirements and architecture of the AI/ML constituent through functional analysis?
 - ☐ [] Yes
 - ☐ [] No
- Have you deactivated unused functions of the COTS ML model?
 - ☐ [] Yes
 - ☐ [] No

Surrogate Model (SU)

- Have you captured the accuracy and fidelity of the reference model to support verification of the accuracy of the surrogate model?
 - ☐ [] Yes
 - ☐ [] No
- Have you identified, documented, and mitigated additional sources of uncertainties linked with the use of a surrogate model?

- ☐ [] Yes
- ☐ [] No

Explainability (EXP)

- Have you identified stakeholders other than end users that need explainability of the AI-based system at any stage of its life cycle, including their roles, responsibilities, and expected expertise?
 - ☐ [] Yes
 - ☐ [] No
- Have you characterized the need for explainability to be provided for each stakeholder or group of stakeholders?
 - ☐ [] Yes
 - ☐ [] No
- Have you identified methods at AI/ML item and/or output level satisfying the specified AI explainability needs?
 - ☐ [] Yes
 - ☐ [] No
- Does the AI-based system have the ability to deliver an indication of the level of confidence in the AI/ML constituent output based on actual measurements or quantification of uncertainty?
 - ☐ [] Yes
 - ☐ [] No
- Does the AI-based system monitor its inputs are within specified operational boundaries (both in terms of input parameter range and distribution) in which the AI/ML constituent performance is guaranteed?
 - ☐ [] Yes
 - ☐ [] No
- Does the AI-based system monitor its outputs are within specified operational performance boundaries?
 - ☐ [] Yes
 - ☐ [] No
- Does the AI-based system monitor that its AI/ML constituent outputs (per Objective EXP-04) are within specified operational level of confidence?
 - ☐ [] Yes
 - ☐ [] No

Let me know if you'd like me to make any changes!