EASA Concept Paper: Guidance for Level 1 & 2 Machine Learning Applications

Trustworthiness Analysis

 Has a trustworthiness analysis been performed for this application?
○ Yes○ No
Data Management
• Are data management requirements captured for each individual data point?
○ Yes○ No
Is data collection complete and thorough?
○ Yes○ No
• Are data labels accurate and consistent (only applicable to supervised learning)?
○ Yes○ No
 Has data preparation been performed, including pre-processing, data transformation and feature engineering?
○ Yes○ No
 Are the various data sets used in the learning phase (training, validation, and test) identified?
○ Yes○ No
 Have the data sets been verified for accuracy, completeness, and representativeness with respect to the ML requirements and AI/ML constituent ODD?
○ Yes○ No
Are independence requirements between data sets met?
○ Yes○ No

 Has unwanted bias inherent to the data sets been identified and eliminated?
○ Yes○ No
Learning Strategies
• Is the learning strategy supervised, unsupervised, or reinforcement?
SupervisedUnsupervisedReinforcement
 Has the learning algorithm processed the input data set?
○ Yes○ No
 Does a cost function measure the difference between the ML model output and expected output (labels in the data sets)?
○ Yes○ No
• Are the ML model parameters adjusted to increase the accuracy of the ML model?
○ Yes○ No