Striving for FAIR Artificial Intelligence Models in the Medical Community

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Abstract
The acronym FAIR stands for the attributes of „Findability", „Accessibility", „Interoperability" and „Reusability" and was introduced in a 2016 paper [1]. It is now widely recognized that these principles play a crucial role in enhancing the reproducibility and transparency of models and datasets, which are continuously being developed by interdisciplinary research teams. In this artificial intelligence driven era, compliance to the FAIR principles ensures that models and training data remain accessible, interoperable and reusable for further research. To encourage the adoption of these principles, we propose a set of semi-quantifiable measures for assessing the level of FAIRness. This is accomplished by using a set of FAIRness metrics for each principle and calculating a combined FAIRness score (1-5) for every model and dataset employed. Further on, a minimum threshold for each individual score is introduced in order to ensure proper adoption and usability. The importance of utilizing these principles within the medical community is particularly critical due to the complexity, multidimensionality and sparsity of medical datasets which are prone to misinterpretation. Thus, by following these guidelines, one can reduce the risk of incorrect predictions and enhance the overall patient experience.

Keywords*:* FAIR Principles; Artificial Intelligence; FAIRness; Medicine.

Reference
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