CLAIMS,

1. A **method for selection of priority-wise artificially intelligent mechanisms per one or more characteristics**, said method comprising the steps of:
   - receiving (DIM) images as **data items (DI)**;
   - identifying (IDR) an **artificially intelligent system (AI1, AI2, AI3,….., AIn)** being used for determination of efficacy, each of the data items (DI), being processed by one or more identified **artificially intelligent systems (AI1, AI2, AI3,….., AIn)**;
   - parsing (SP, PRP), and outputting, scan characteristics and patient characteristics, from the **data items (DI)**, output of said parsing (SP, PRP) being **first output (scan characteristics) (O1)** and **second output (patient characteristics) (O2)**;
   - analysing (AE) to receive at least a first output and / or at least a second output and configured to receive feedback signal from a **feedback model (FM1, FM2, FM3)**; and
   - serving, as an output (OM), upon analysing (AE), a **selection (S)** of a priority-wise-ranked artificially intelligent system, from the plurality of **artificially intelligent systems (AI1, AI2, AI3,….., AIn), said selected system being** per parsed scan characteristic (O1) and / or per parsed patient characteristic (O2).

2. The method as claimed in claim 1 wherein, said paring being selected from a group of parsing steps consisting of:
   - parsing (SP), and outputting, scan characteristics, from the **data items (DI)**, output of said scan parser (SP) being a **first output (scan characteristics) (O1)**;

- parsing (PRP), and outputting, patient characteristics, from the **data items (DI)**, output of said patient parser (PRP) being a **second output (patient characteristics) (O2)**;

3. The method as claimed in claim 1 wherein, said feedback signal being received from:
    - a **first feedback module (FM1)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback relating to accuracy metrics of analysis, correlative to performance metrics of the selected artificially intelligent system, is recorded and fed back to the step of analysing **(AE);**
    - a **second feedback module (FM2)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback correlative to first output (O1) of the selected artificially intelligent system, is recorded and fed back to the step of analysing **(AE)**;
    - a **third feedback module (FM3)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback correlative to second output (O2) of the selected artificially intelligent system, is recorded and fed back to the step of analysing **(AE)**.

4. The method as claimed in claim 1 wherein, said step of **analysing (AE)** being a **cohort-based vectorization analysis** configured to determine, and form, cohort-based data sets in order to determine, and form, cohort-based characteristics, characterized, in that,
    - **sorting (SR)** data items (DI), basis its data and / or its metadata, into cohorts according to sorting rules, correlative to said first output (O1) and / or said second output (O2), defined in a sorting rule engine;

- using, by a performance processor (PP), one or more data items (DI), with specific metadata, as sorted by said sorter (SR), in order to compute a performance function for all data items (DI) belonging to individual cohorts and intersections of two or more cohorts; and
- configured to extracting features from the cohorts, upon which a performance function is used by said **performance processor (PP)**, said performance function being correlative to one or more metrics relating to said first output (O1), said performance function being applied to each cohort in order to obtain its feature, said feature processor being configured to collate a set of obtained features, per cohort, to form a feature vector X, for each data item, each vector being shaped by a first set ("k") of data items and a second set ("n") of features;

5. The method as claimed in claim 1 wherein, said **analysis engine (AE)** being a **cohort-based vectorization module** configured to perform the steps of:
   - receiving the first output (O1) and / or the second output (O2) and a feedback signal from a feedback model (FM1, FM2, FM3);
   - computing cohorts based on sorting rules defined in a sorting rule engine, followed by grouping data items (DI) with common characteristics;
   - processing cohorts, using a performance processor (PP), to compute performance metrics for individual cohorts and their intersections;
   - developing feature vectors (X) based on performance metrics, for data items (DI), sharing common characteristics;
   - setting a ground truth for training artificially intelligent system **(AI1, AI2, AI3,….., AIn)** using manual mechanisms or machine-fed mechanisms;

- calculating trust scores for data items (DI) using regression or classification models with weighted features, minimizing a loss function; and

determining prioritization of artificially intelligent system **(AI1, AI2, AI3,….., AIn)** based on threshold values and a rule engine considering the relative importance of characteristics identified by machine learning models,said step of analysing (AE) cooperating with:

- generating data, from said first feedback module (FM1), correlative to said data items (DI);
- outputting (SP) said first output (O1) from said data items (DI) configured to be analysed by said performance parser (PP);
- outputting (PRP) said second output (O2) from said data items (DI) configured to be analysed by said performance parser (PP); and
- establishing Ground Truth data (DGT) for each cohort, in order to obtain metrics per cohort per data item (DI) to be fed to a **training module**; and
- comparing said established ground truth per data item (DI) with its own analysed output per data item (DI) in order to determine updateable weights (W) based on agreement between said ground truth and said analysed output.

6. The method as claimed in claim 1 wherein, said step of analysing (AE) cooperating with:
   - organizing (DMR) output of said analysis engine in correlation with said first output (O1) and said second output (O2); and
   - generating a mapping between each considered artificially intelligent system **(AI1, AI2, AI3,….., AIn)** and its corresponding trust score.

7. The method as claimed in claim 1 wherein, said method comprising the steps of:
   - gathering (DIM) data items (DI), including ground truth predictions, per data item (DI), made by one or more of the existing artificially intelligent systems (AI1, AI2, AI3,….., AIn), first output (O1), and said second output (O2); and
   - using said gathered data items (DI), their ground truth predictions, in order to feed to a Training Module which trains internal weights (W) for said analysis engine (AE).

8. A **system for selection of priority-wise artificially intelligent mechanisms per one or more characteristics**, said system comprising:
   - a **data input module (DIM)** configured to receive images, as **data items (DI)**;
   - an **identifier (IDR)** configured to identify an **artificially intelligent system (AI1, AI2, AI3,….., AIn)** being used for determination of efficacy, each of the data items (DI), from the data input module (DIM), being processed by one or more identified **artificially intelligent systems (AI1, AI2, AI3,….., AIn)**;
   - a set of **parsers (SP, PRP)**, configured to parse, and output, scan characteristics and patient characteristics, from the **data items (DI)**, output of said parsers (SP, PRP) being **first output (scan characteristics) (O1)** and **second output (patient characteristics) (O2)**;
   - an **analysis engine (AE)** configured to receive at least a first output and / or at least a second output and configured to receive feedback signal from a **feedback model (FM1, FM2, FM3)**; and

- an **output module (OM)**, cooperating with the analysis engine (AE), serving a **selection (S)** of a priority-wise-ranked artificially intelligent system, from the plurality of **artificially intelligent systems (AI1, AI2, AI3,….., AIn), said selected system being** per parsed scan characteristic (O1) and / or per parsed patient characteristic (O2).

9. The system as claimed in claim 1 wherein, said set of parsers being selected from a group of parsers consisting of:
   - a **scan parser (SP)** configured to parse, and output, scan characteristics, from the **data items (DI)**, output of said scan parser (SP) being a **first output (scan characteristics) (O1)**; and
   - a **patient parser (PRP)** configured to parse, and output, patient characteristics, from the **data items (DI)**, output of said patient parser (PRP) being a **second output (patient characteristics) (O2)**;

10. The system as claimed in claim 1 wherein, said feedback model comprising a:
   - **first feedback module (FM1)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback relating to accuracy metrics of analysis, correlative to performance metrics of the selected artificially intelligent system, is recorded and fed back to the **analysis engine (AE)**;

   - a **second feedback module (FM2)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback correlative to first output (O1) of the selected artificially intelligent system, is recorded and fed back to the **analysis engine (AE)**;

- a **third feedback module (FM3)**, per artificially intelligent system **(AI1, AI2, AI3,….., AIn)**, in that, feedback correlative to second output (O2) of the selected artificially intelligent system, is recorded and fed back to the **analysis engine (AE)**.

11. The system as claimed in claim 1 wherein, said **analysis engine (AE)** being a **cohort-based vectorization module** configured to determine, and form, cohort-based data sets in order to determine, and form, cohort-based characteristics, characterized, in that,
    - a **sorter (SR)** sorts data items (DI), basis its data and / or its metadata, into cohorts according to sorting rules, correlative to said first output (O1) and / or said second output (O2), defined in a sorting rule engine;
    - a **performance processor (PP)** configured to use one or more data items (DI), with specific metadata, as sorted by said sorter (SR), in order to computes a performance function for all data items (DI) belonging to individual cohorts and intersections of two or more cohorts; and
    - a **feature processor** configured to extract features from the cohorts, upon which a performance function is used by said **performance processor (PP)**, said performance function being correlative to one or more metrics relating to said first output (O1), said performance function being applied to each cohort in order to obtain its feature, said feature processor being configured to collate a set of obtained features, per cohort, to form a feature vector X, for each data item, each vector being shaped by a first set (“k”) of data items and a second set (“n”) of features;

12. The system as claimed in claim 1 wherein, said **analysis engine (AE)** being a **cohort-based vectorization module** configured to perform the steps of:

- receiving the first output (O1) and / or the second output (O2) and a feedback signal from a feedback model (FM1, FM2, FM3);
- computing cohorts based on sorting rules defined in a sorting rule engine, followed by grouping data items (DI) with common characteristics;
- processing cohorts, using a performance processor (PP), to compute performance metrics for individual cohorts and their intersections;
- developing feature vectors (X) based on performance metrics, for data items (DI), sharing common characteristics;
- setting a ground truth for training artificially intelligent system **(AI1, AI2, AI3,….., AIn)** using manual mechanisms or machine-fed mechanisms;
- calculating trust scores for data items (DI) using regression or classification models with weighted features, minimizing a loss function; and
- determining prioritization of artificially intelligent system **(AI1, AI2, AI3,….., AIn)** based on threshold values and a rule engine considering the relative importance of characteristics identified by machine learning models,

said analysis engine (AE) cooperating with:

- a **training module** for generating data, from said first feedback module (FM1), correlative to said data items (DI);
- a **scan parser (SP)**, from said set of parsers (SP, PRP), in order to output said first output (O1) from said data items (DI) configured to be analysed by said performance parser (PP);
- a **patient parser (PRP)**, from said set of parsers (SP, PRP), in order to output said second output (O2) from said data items (DI) configured to be analysed by said performance parser (PP);

- a **Ground Truth Module (GTM)**, in cooperation with said performance parser (PP), establishing Ground Truth data (DGT) for each cohort, in order to obtain metrics per cohort per data item (DI) to be fed to the **training module**; and
- said analysis engine (AE) comparing said established ground truth per data item (DI) with its own analysed output per data item (DI) in order to determine updateable weights (W) based on agreement between said ground truth and said analysed output.

13. The system as claimed in claim 1 wherein, said analysis engine (AE) cooperating with:
    - a ranking module (DMR) to organize output of said analysis engine in correlation with said first output (O1) and said second output (O2); and
    - said output module (OM) configured to generates a mapping between each considered artificially intelligent system **(AI1, AI2, AI3,….., AIn)** and its corresponding trust score.

14. The system as claimed in claim 1 wherein, said system comprising:
    - said **data input module (DIM)** configured to gather data items (DI), including ground truth predictions, per data item (DI), made by one or more of the existing artificially intelligent systems (AI1, AI2, AI3,….., AIn), first output (O1), and said second output (O2); and
    - said performance parser (PP) configured to use said gathered data items (DI), their ground truth predictions, in order to feed to a Training Module which trains internal weights (W) for said analysis engine (AE).