**Definitions**

* Semi-automation: a process or procedure that is performed by the combined activities of man and machine with both human and machine steps typically orchestrated by a centralized computer controller.
* K nearest neighbors: The k-nearest neighbor algorithm, also known as KNN or k-NN, is a non-parametric, supervised learning classifier, which uses proximity to make classifications or predictions about the grouping of an individual data point.
* F-score: The F-score, also called the F1-score, is a measure of a model's accuracy on a dataset. It is used to evaluate binary classification systems, which classify examples into 'positive' or 'negative'.

 

* Bayesian neural network (BNN): Bayesian neural network combines neural network with Bayesian inference. Simply speaking, in BNN, we treat the weights and outputs as the variables and we are finding their marginal distributions that best fit the data.
* Dice coefficient: a statistical tool, which measures the similarity between two sets of data. This index has become arguably the most broadly used tool in the validation of image segmentation algorithms created with AI, but it is a much more general concept which can be applied to sets of data for a variety of applications. The Dice coefficient accounts for the class imbalance between the foreground and background. The metric rates the overlap between ROI (region of interest) pixels in the predicted mask and the ground truth.
* Overfitting: In mathematical modeling, overfitting is "the production of an analysis that corresponds too closely or exactly to a particular set of data, and may therefore fail to fit to additional data or predict future observations reliably"
* Voxel (definition in image processing): A voxel is a unit of graphic information that defines a point in three-dimensional space. Since a pixel (picture element) defines a point in two-dimensional space with its X and Y coordinates, a third z coordinate is needed.
* Grad-cam method: The Gradient-weighted Class Activation Mapping (Grad-cam method) is a technique that increases the transparency of CNN-based models by visualizing the regions of input that are "important" for model predictions