

Research Questions (1)

Analysis of Performance Influencing Factors in INVASE

1. Within the framework of INVASE, how do the following factors influence the explainer's ability to identify relevant features while discarding irrelevant ones?
 - (a) Does longer training improve the explainer's performance? If not, how does it affect the results?
 - (b) If longer training may lead to worse performance, what policy could be proposed to prevent selecting a suboptimal explainer?
 - (c) How sensitive is the explainer's performance to the choice of hyperparameter λ ?
 - (d) Does the presence of a baseline model consistently enhance the explainer's performance?

Research Questions (2)

Exploration of Potential Improvements to INVASE

2. How can INVASE be improved?
 - (a) If the performance of INVASE is sensitive to the choice of the hyper-parameter λ , how can this sensitivity be mitigated?
 - (b) Can explainer improve its explanations (i.e., a higher true positive rate and a lower false discovery rate) by replacing the baseline neural network with the utilization of unselected feature information?
 - (c) Can explainer provide better explanations (i.e., a higher true positive rate and a lower false discovery rate) by incorporating response variables into its input?