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?

Research Questions (3)

Final Proposed Framework and Analysis

3. By building on the previous attempts, if any of them demonstrate positive performance, what kind of new competitive framework can be proposed?

   (a) Compared to state-of-the-art IFS methods (e.g., INVASE, L2X, LIME, SHAP), what advantages does the new framework offer?

   (b) How does the newly proposed framework perform on other types of data (e.g., text)?

   (c) What limitations does the new framework have?