

## 1. 5% of Missing Values

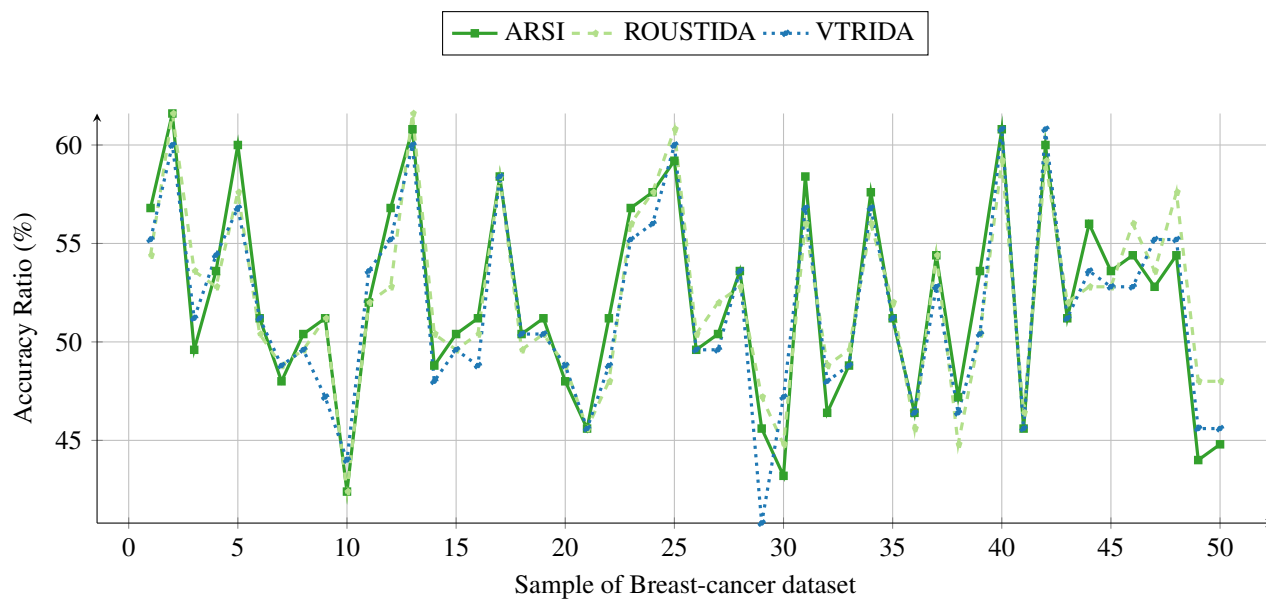


Fig. 1. Behavior of the imputation algorithms with a missing values rate of 5% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 15 runs of a total of 50 runs.

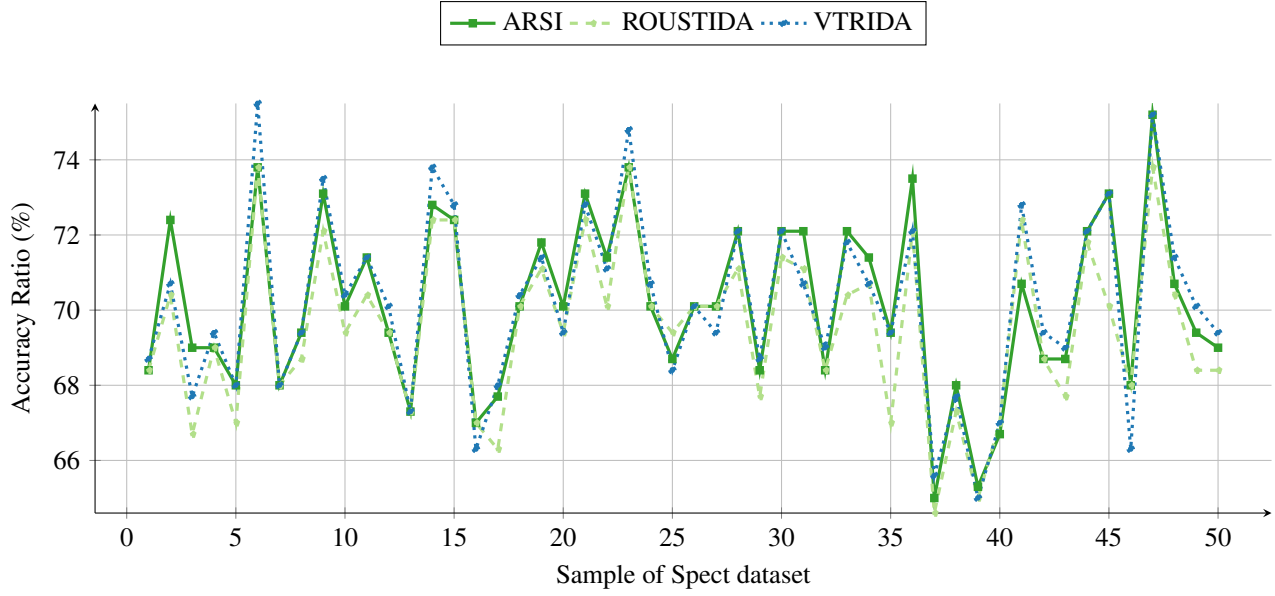


Fig. 2. Behavior of the imputation algorithms with a missing values rate of 5% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 12 runs of a total of 50 runs.

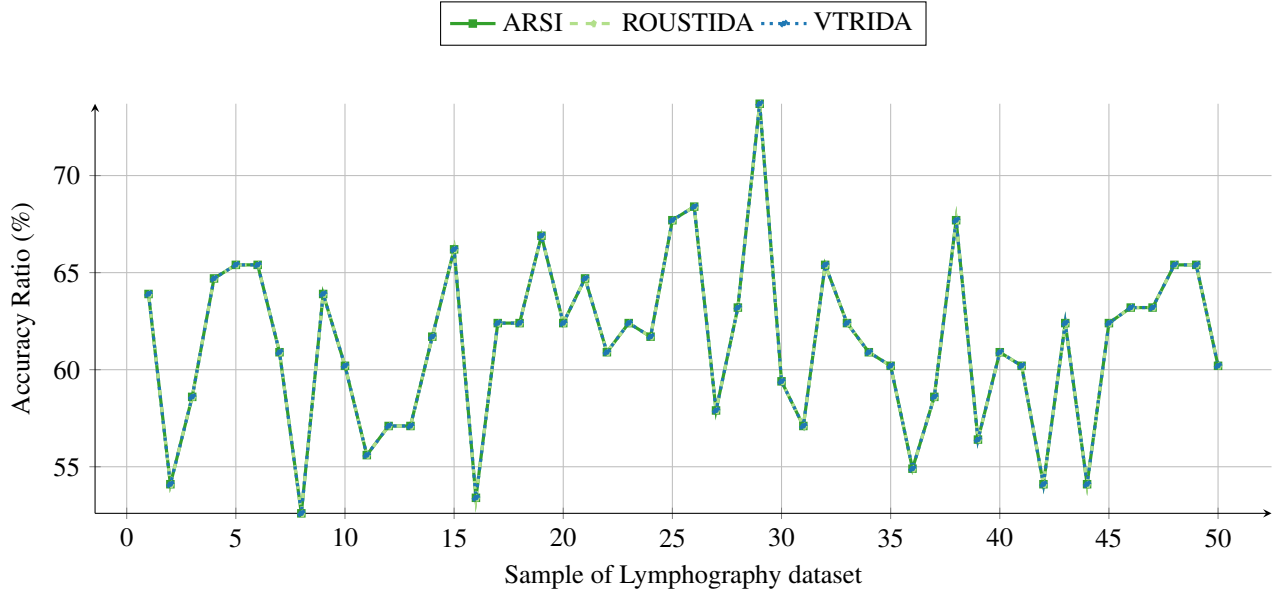


Fig. 3. Behavior of the imputation algorithms with a missing values rate of 5% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 0 runs of a total of 50 runs.

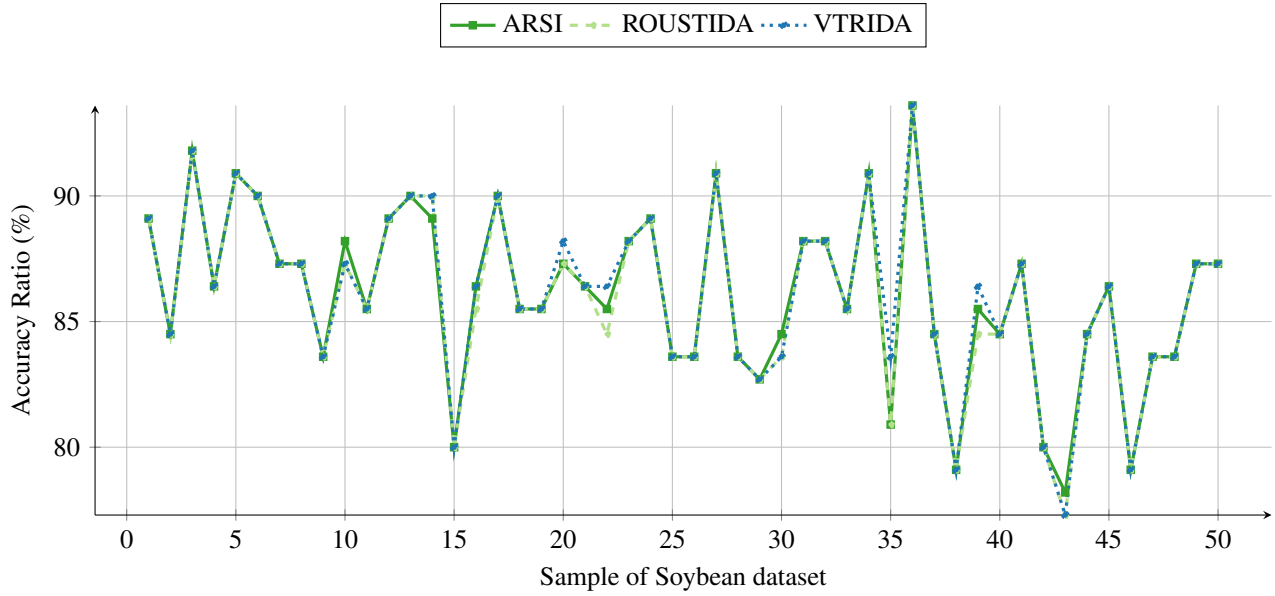


Fig. 4. Behavior of the imputation algorithms with a missing values rate of 5% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 3 runs of a total of 50 runs.

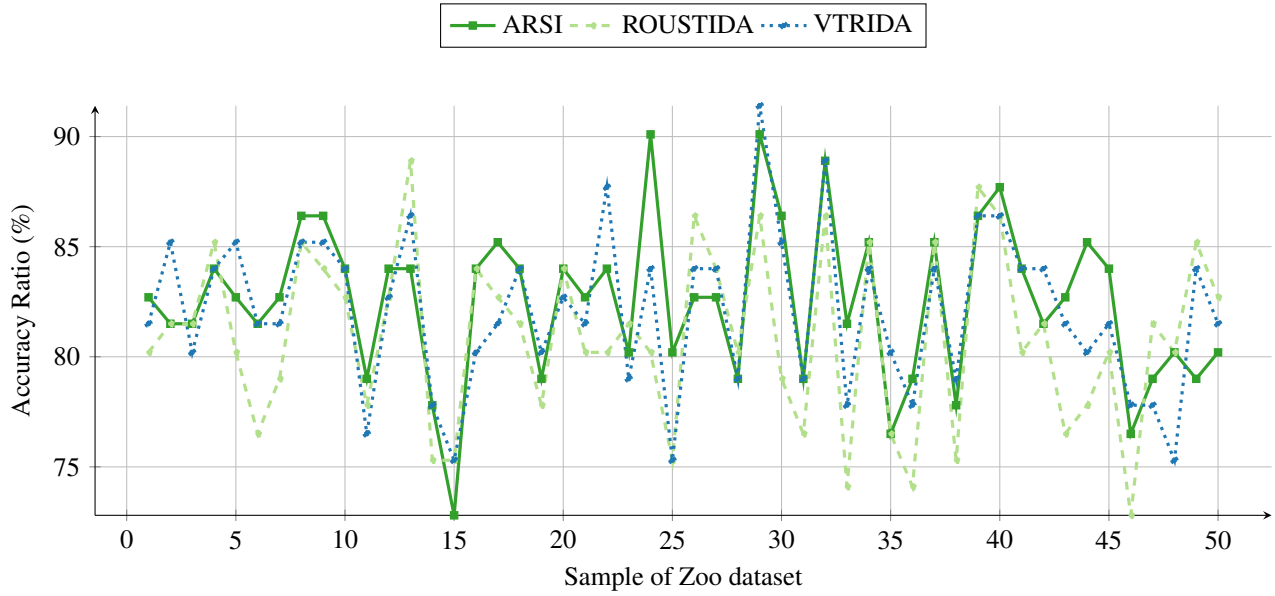


Fig. 5. Behavior of the imputation algorithms with a missing values rate of 5% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 17 runs of a total of 50 runs.

## 2. 10% of Missing Values

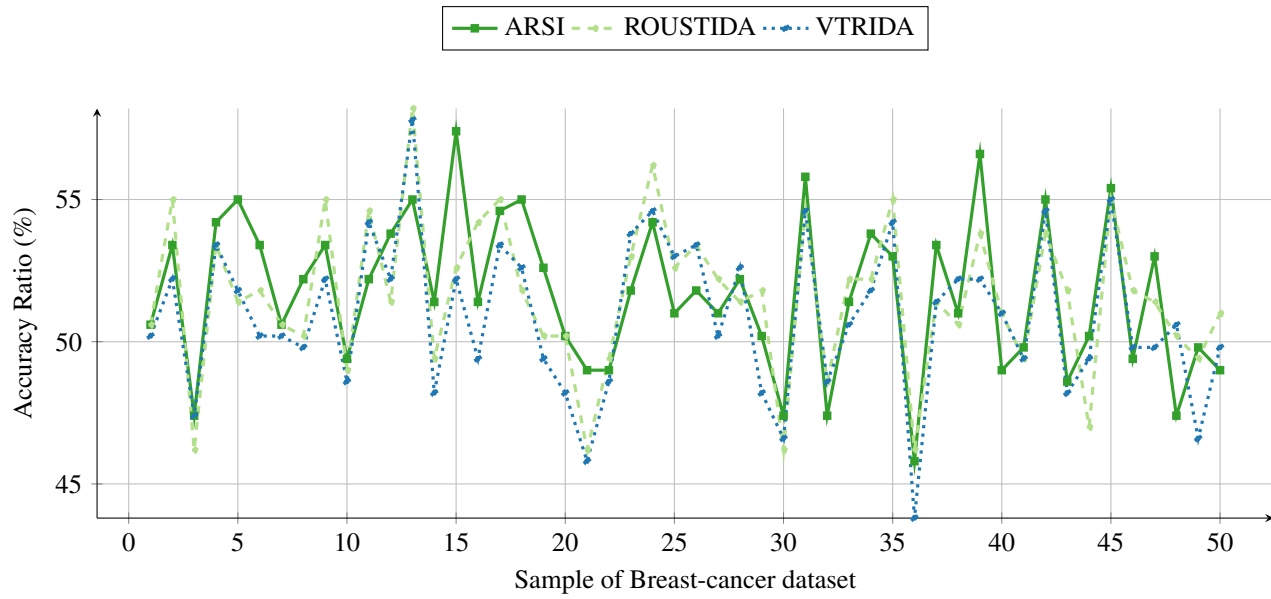


Fig. 6. Behavior of the imputation algorithms with a missing values rate of 10% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 22 runs of a total of 50 runs.

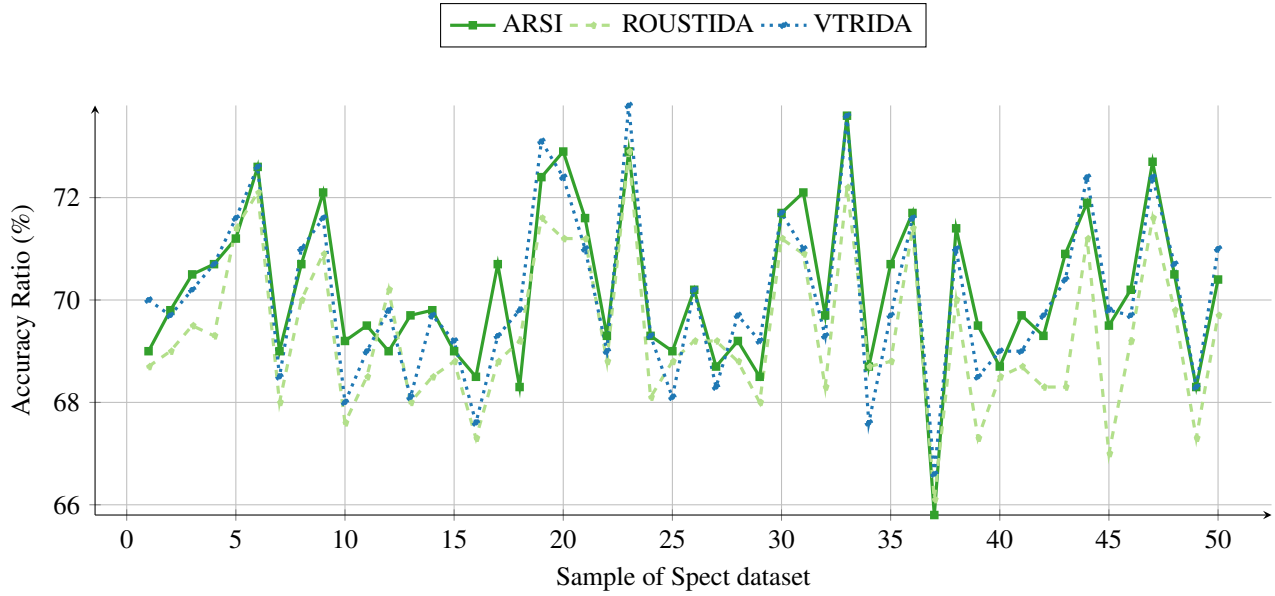


Fig. 7. Behavior of the imputation algorithms with a missing values rate of 10% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 24 runs of a total of 50 runs.

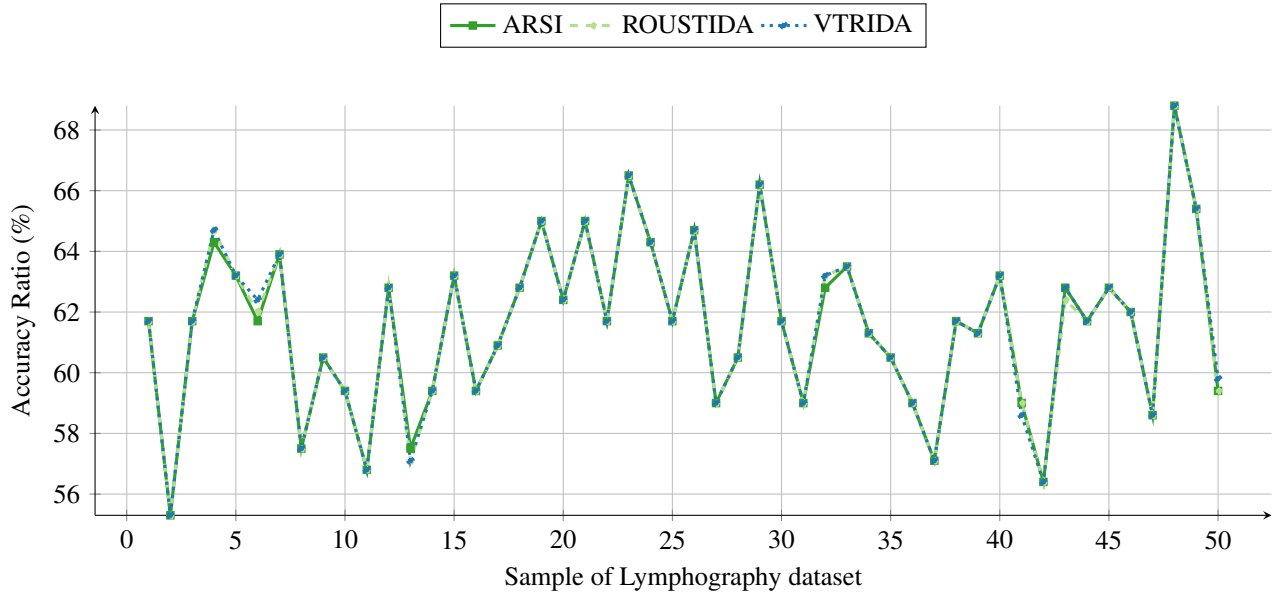


Fig. 8. Behavior of the imputation algorithms with a missing values rate of 10% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 1 runs of a total of 50 runs.

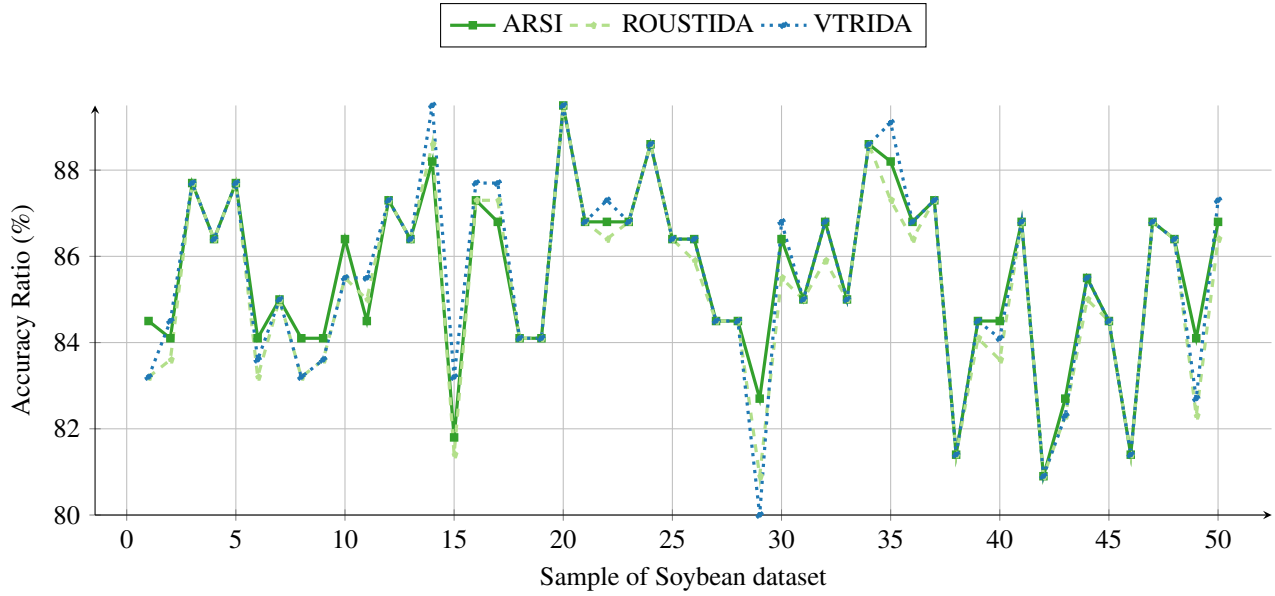


Fig. 9. Behavior of the imputation algorithms with a missing values rate of 10% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 9 runs of a total of 50 runs.

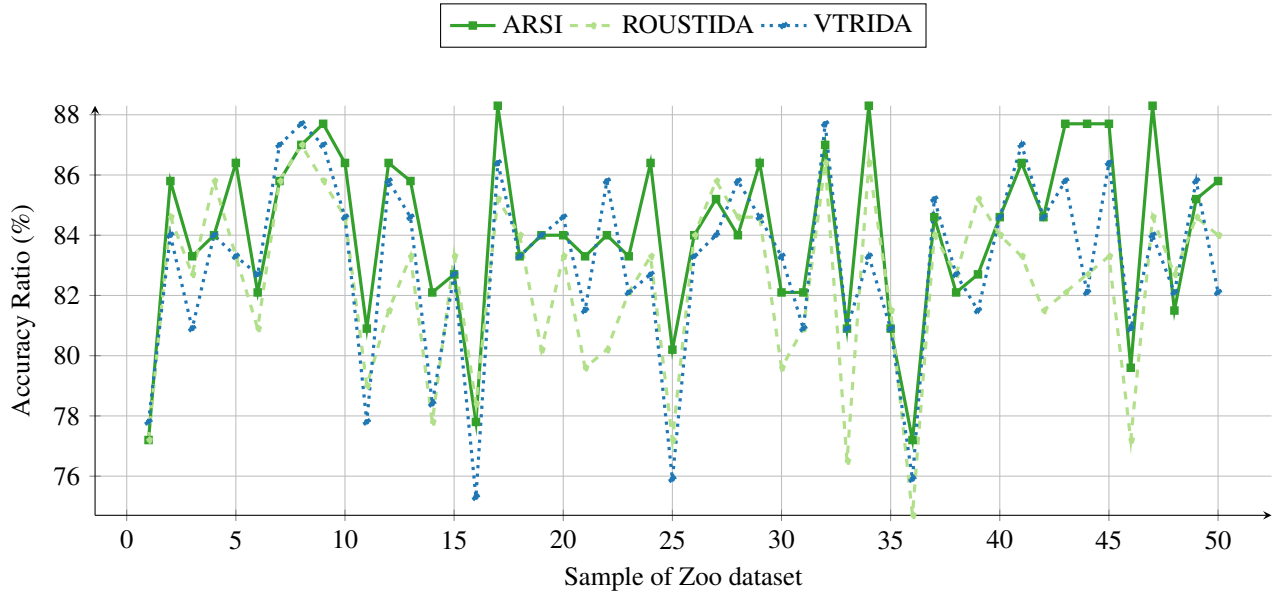


Fig. 10. Behavior of the imputation algorithms with a missing values rate of 10% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 23 runs of a total of 50 runs.

### 3. 15% of Missing Values

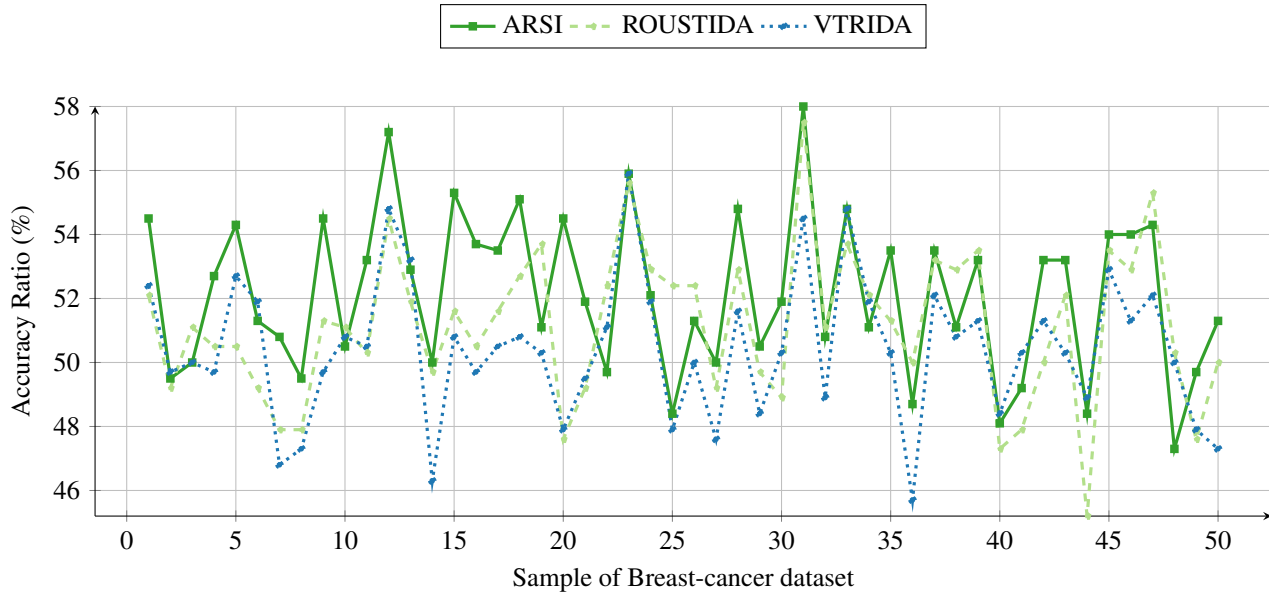


Fig. 11. Behavior of the imputation algorithms with a missing values rate of 15% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 28 runs of a total of 50 runs.

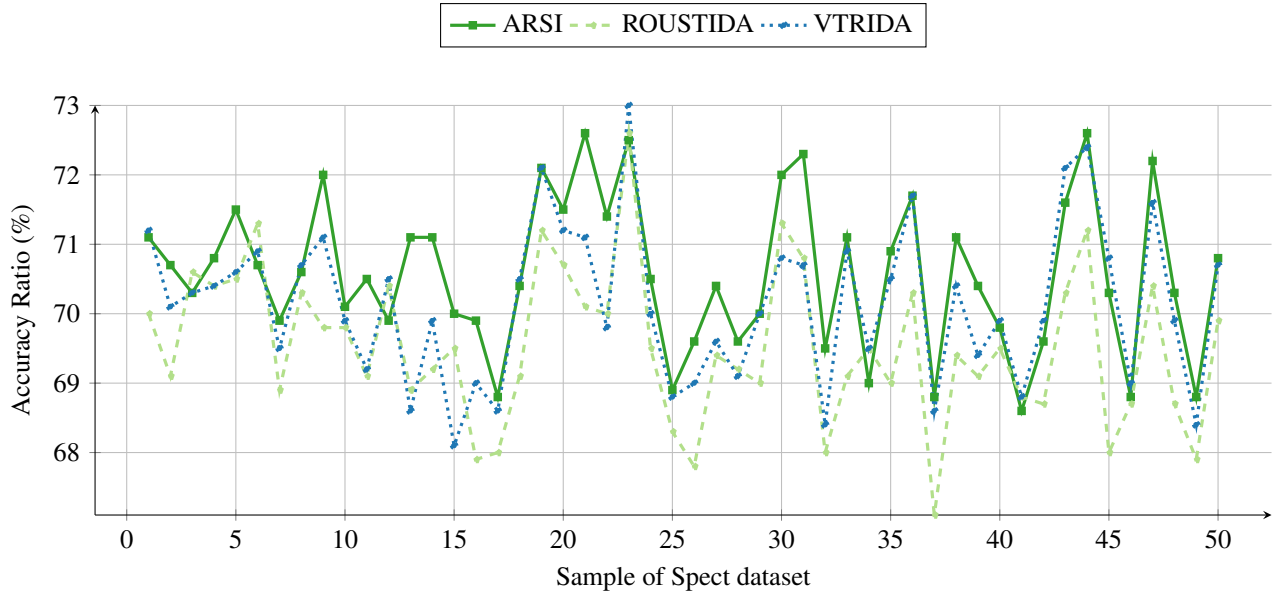


Fig. 12. Behavior of the imputation algorithms with a missing values rate of 15% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 33 runs of a total of 50 runs.

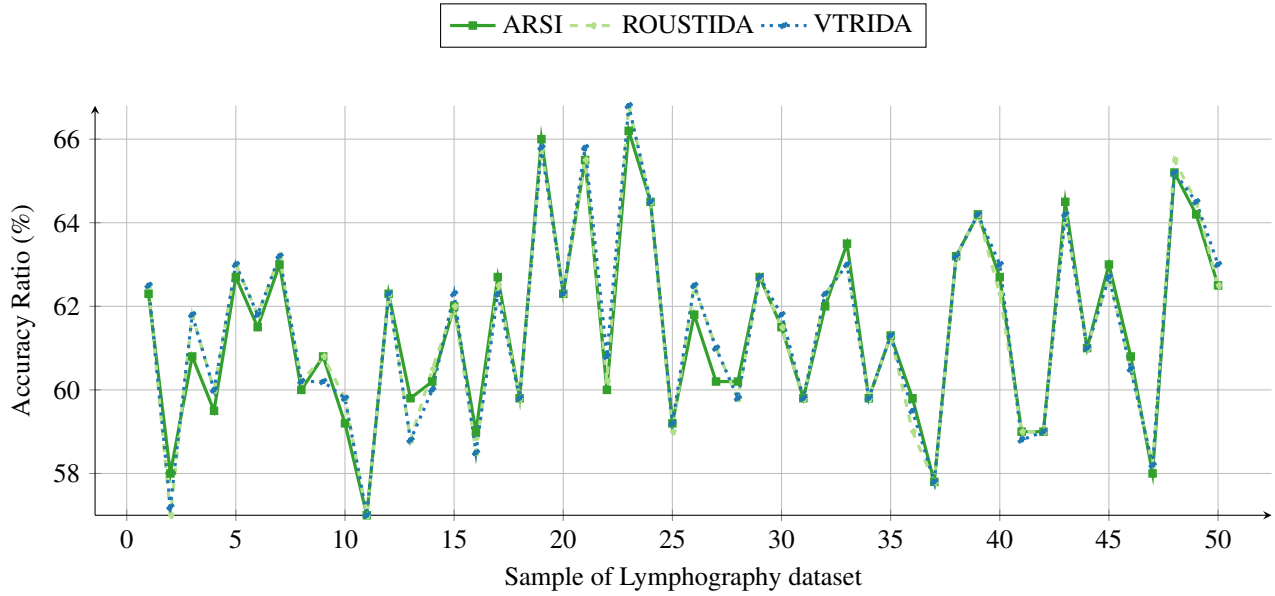


Fig. 13. Behavior of the imputation algorithms with a missing values rate of 15% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 11 runs of a total of 50 runs.



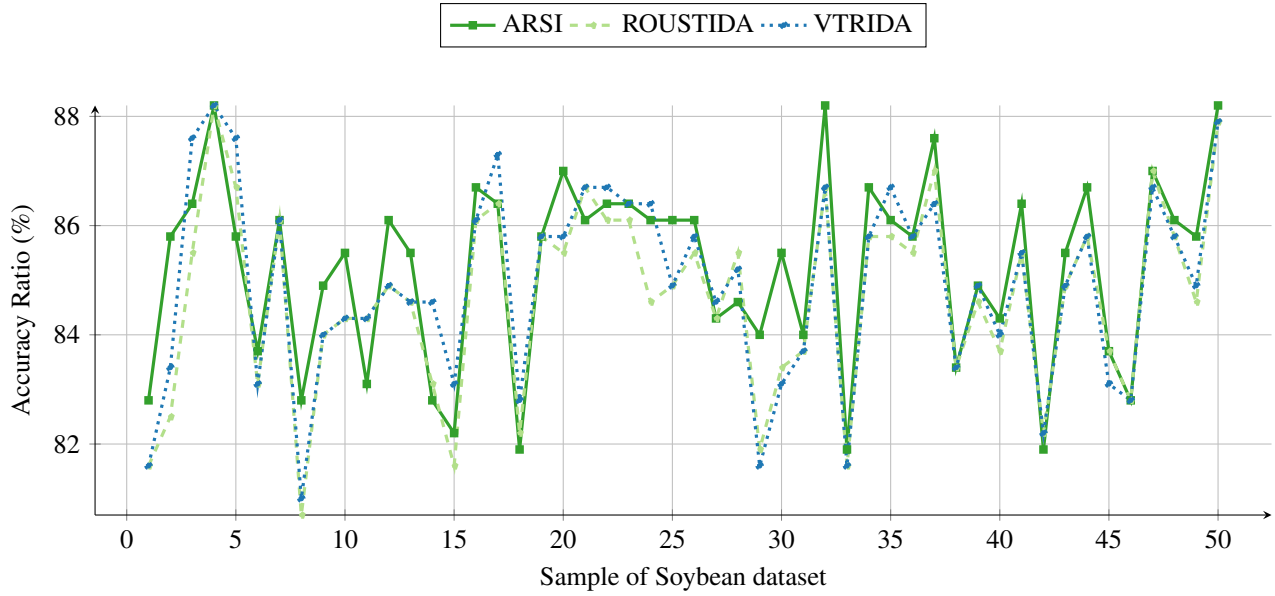


Fig. 14. Behavior of the imputation algorithms with a missing values rate of 15% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 26 runs of a total of 50 runs.

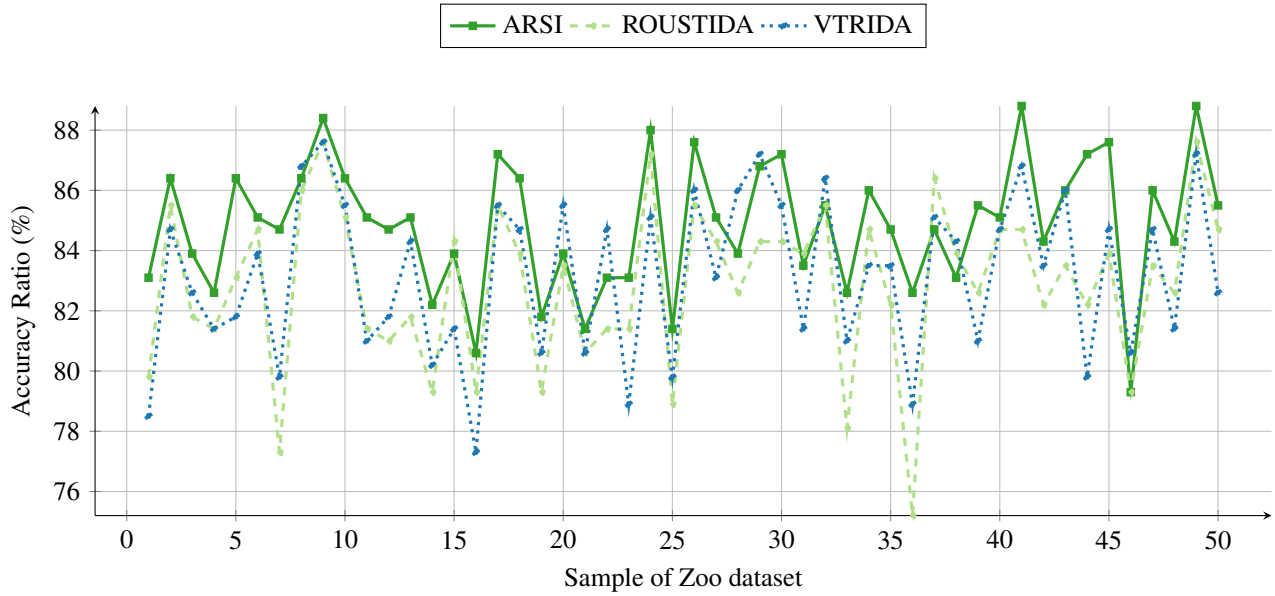


Fig. 15. Behavior of the imputation algorithms with a missing values rate of 15% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 38 runs of a total of 50 runs.

#### 4. 20% of Missing Values

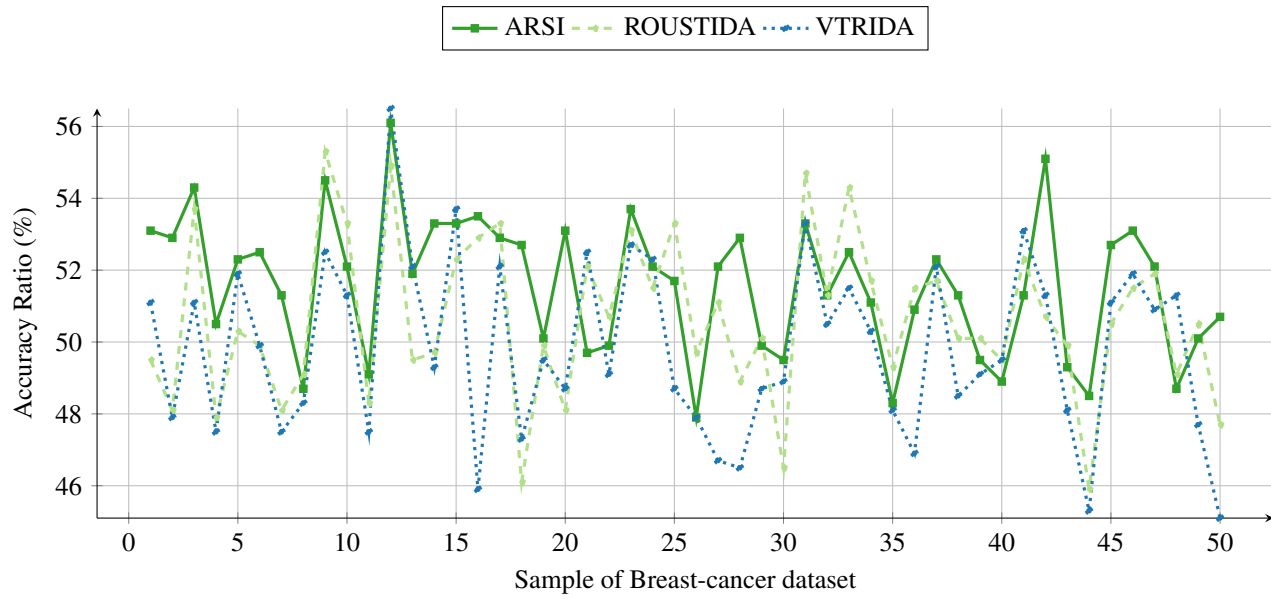


Fig. 16. Behavior of the imputation algorithms with a missing values rate of 20% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 25 runs of a total of 50 runs.

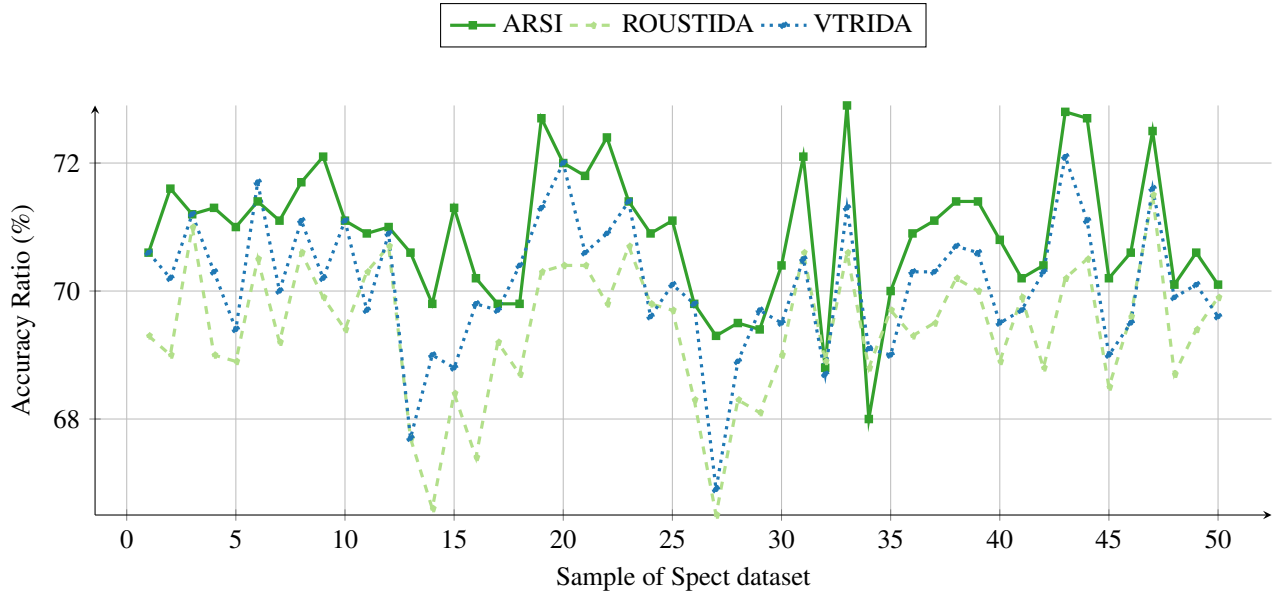


Fig. 17. Behavior of the imputation algorithms with a missing values rate of 20% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 39 runs of a total of 50 runs.

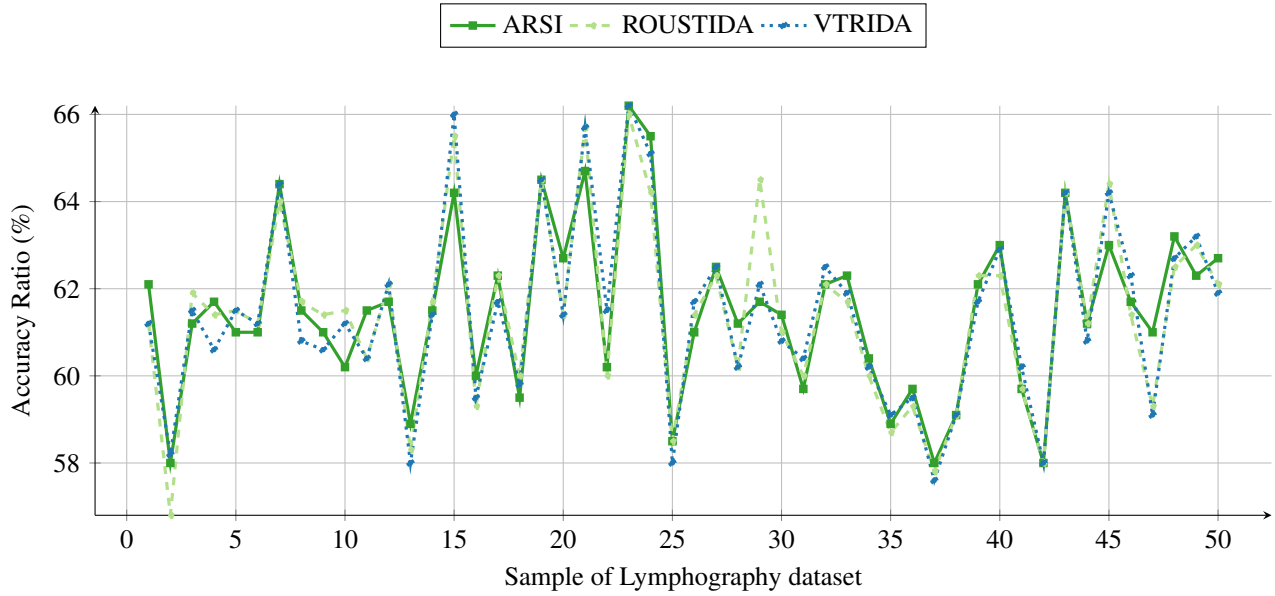


Fig. 18. Behavior of the imputation algorithms with a missing values rate of 20% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 17 runs of a total of 50 runs.

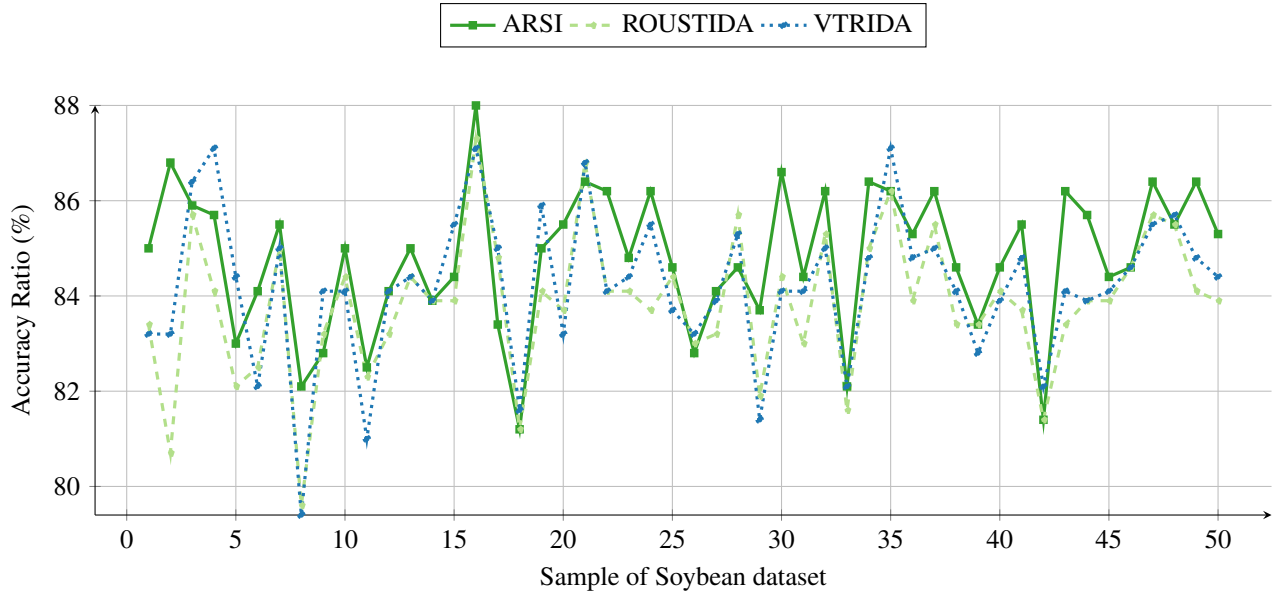


Fig. 19. Behavior of the imputation algorithms with a missing values rate of 20% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 31 runs of a total of 50 runs.

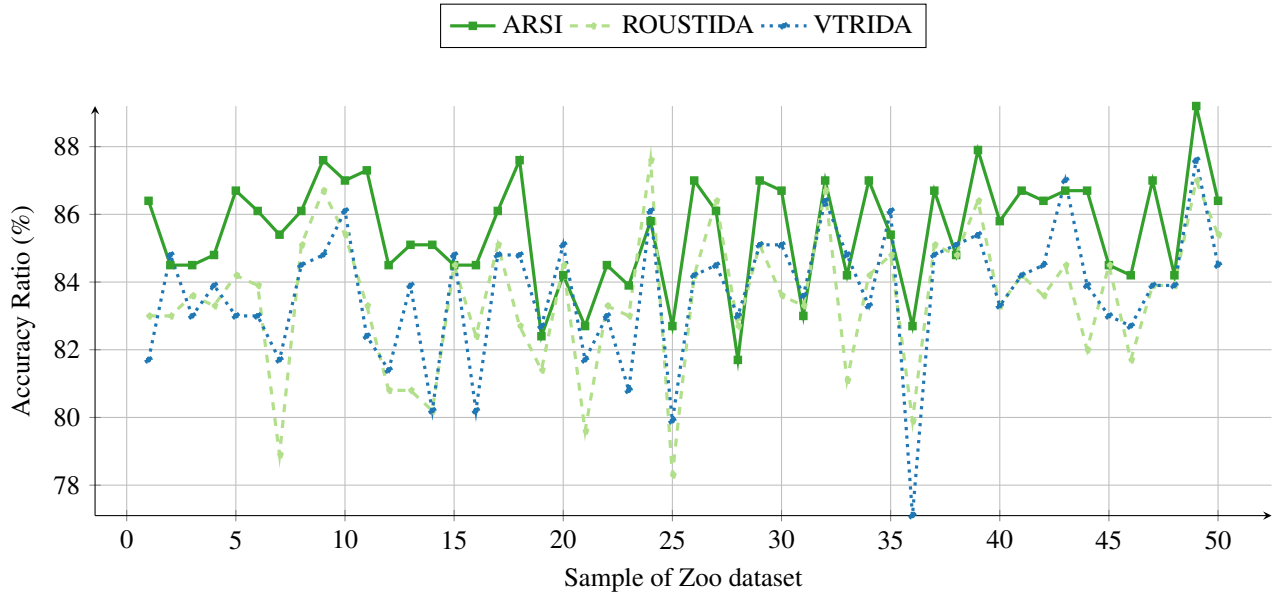


Fig. 20. Behavior of the imputation algorithms with a missing values rate of 20% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 37 runs of a total of 50 runs.

## 5. 25% of Missing Values

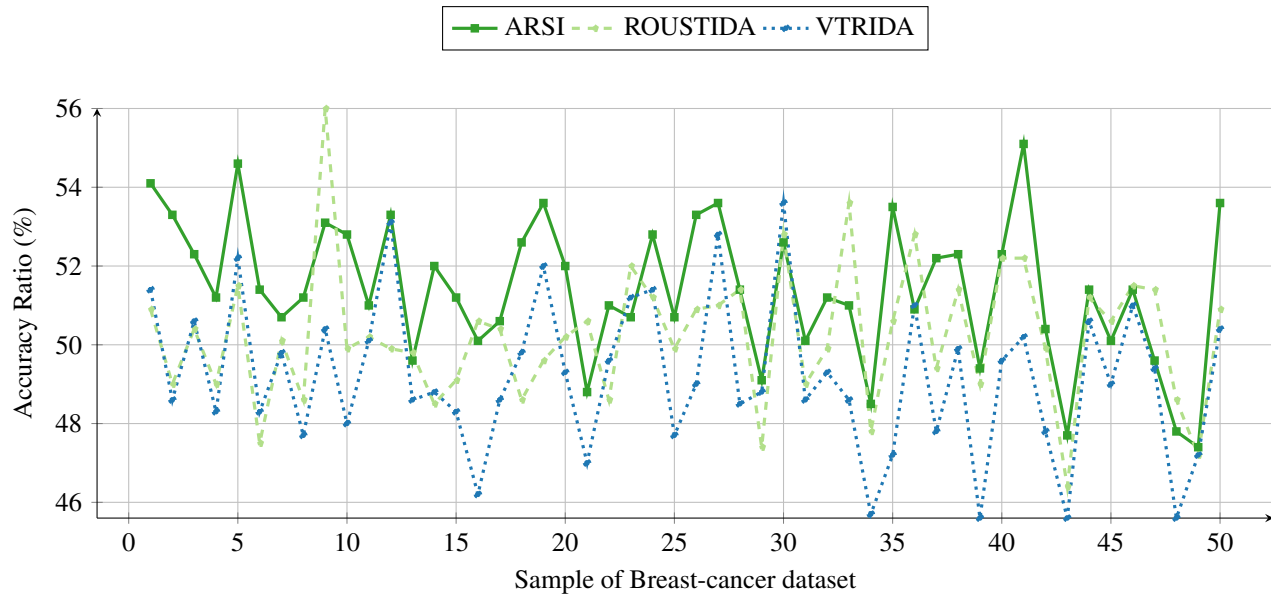


Fig. 21. Behavior of the imputation algorithms with a missing values rate of 25% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 37 runs of a total of 50 runs.

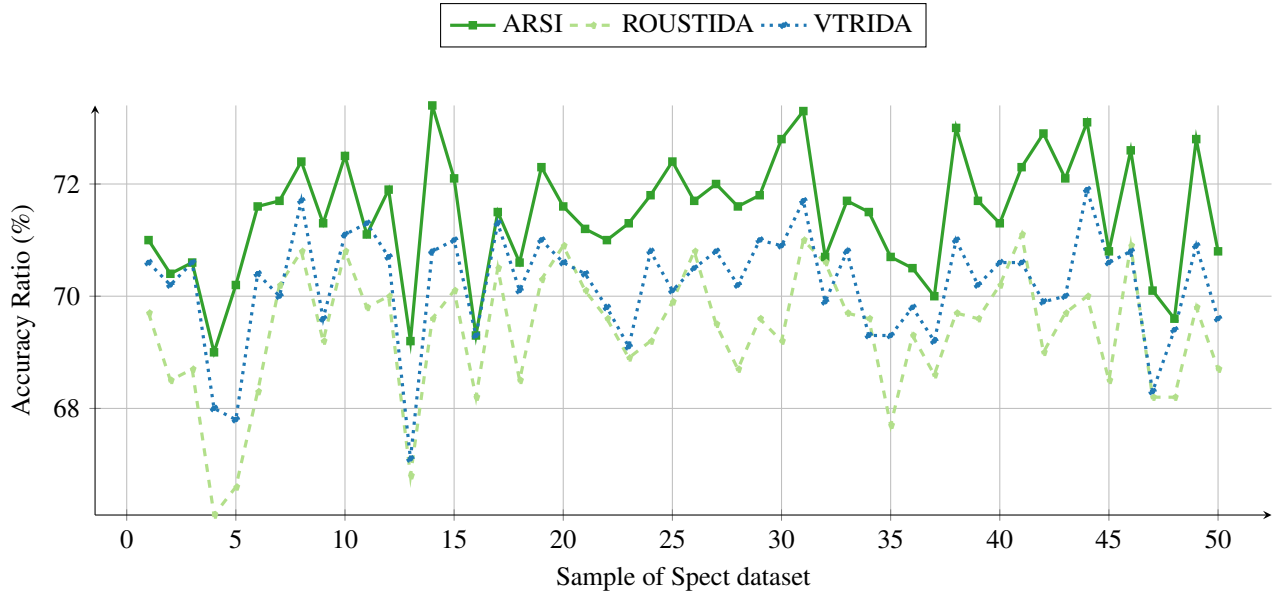


Fig. 22. Behavior of the imputation algorithms with a missing values rate of 25% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 47 runs of a total of 50 runs.

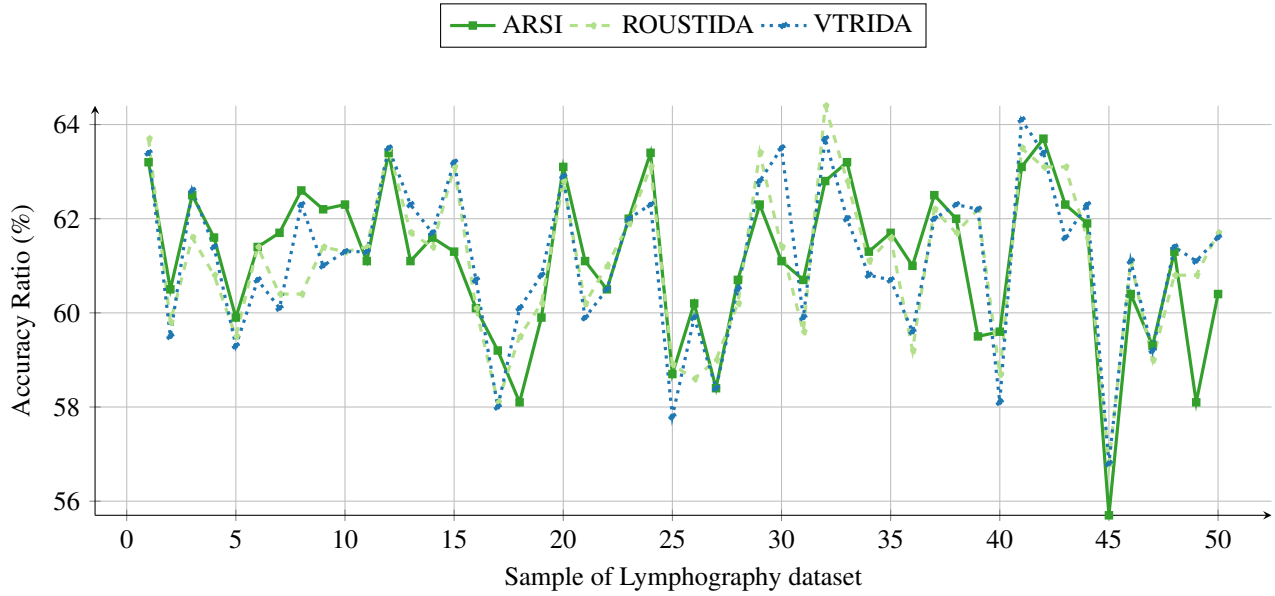


Fig. 23. Behavior of the imputation algorithms with a missing values rate of 25% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 22 runs of a total of 50 runs.

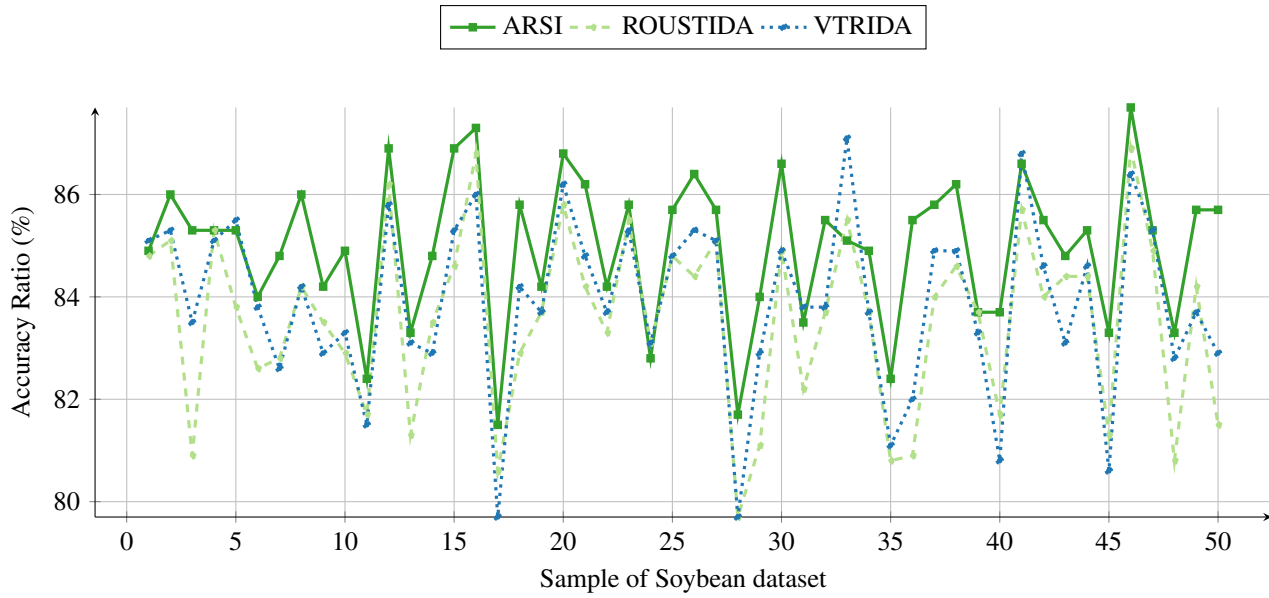


Fig. 24. Behavior of the imputation algorithms with a missing values rate of 25% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 41 runs of a total of 50 runs.

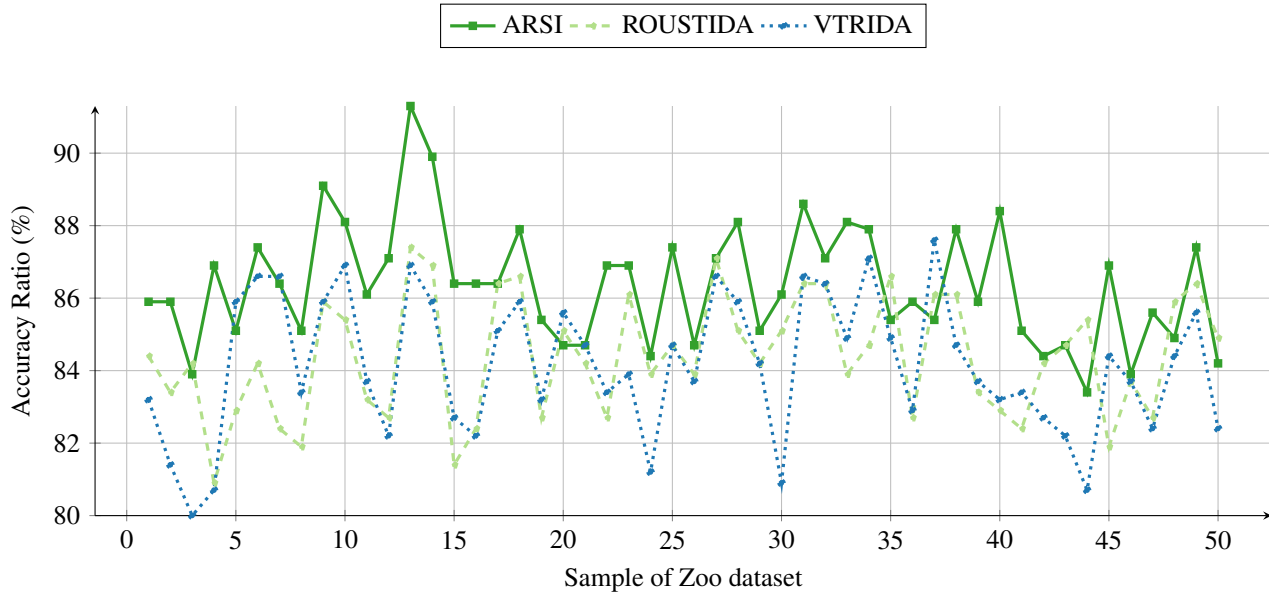


Fig. 25. Behavior of the imputation algorithms with a missing values rate of 25% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 37 runs of a total of 50 runs.

## 6. 30% of Missing Values

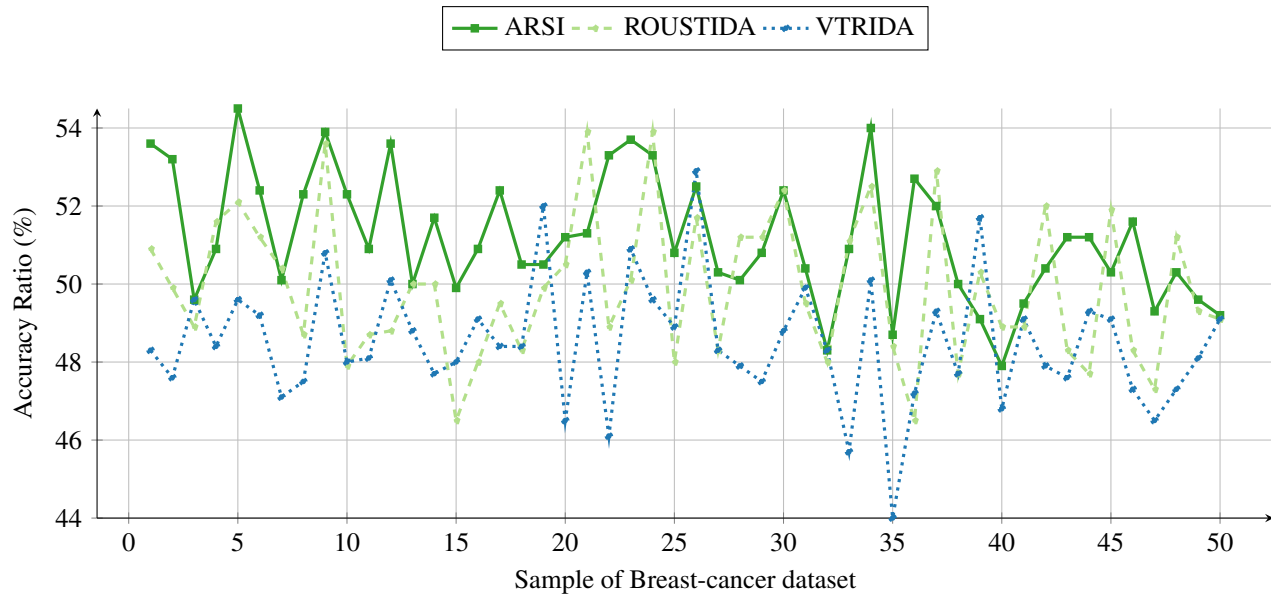


Fig. 26. Behavior of the imputation algorithms with a missing values rate of 30% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 31 runs of a total of 50 runs.



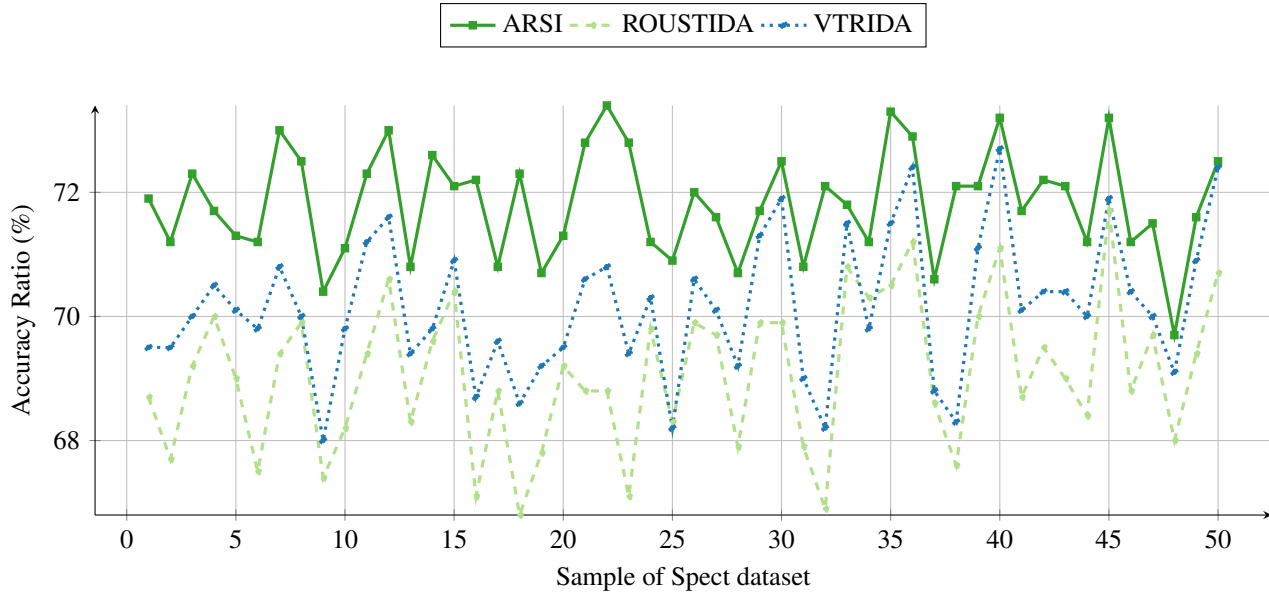


Fig. 27. Behavior of the imputation algorithms with a missing values rate of 30% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 50 runs of a total of 50 runs.

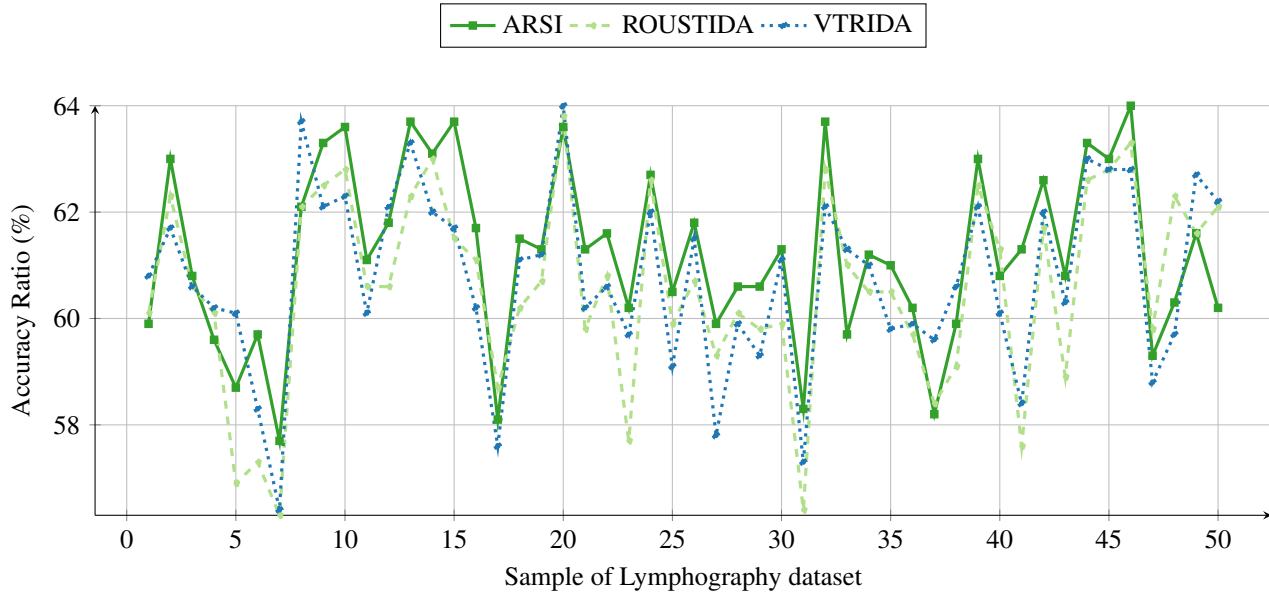


Fig. 28. Behavior of the imputation algorithms with a missing values rate of 30% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 35 runs of a total of 50 runs.

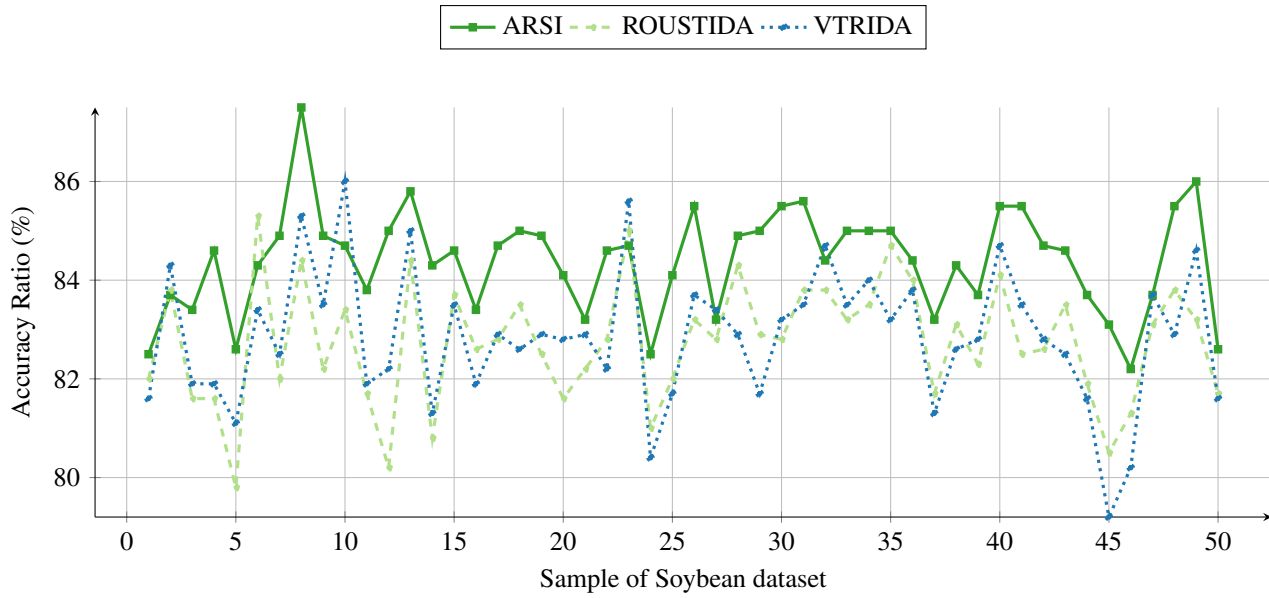


Fig. 29. Behavior of the imputation algorithms with a missing values rate of 30% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 43 runs of a total of 50 runs.

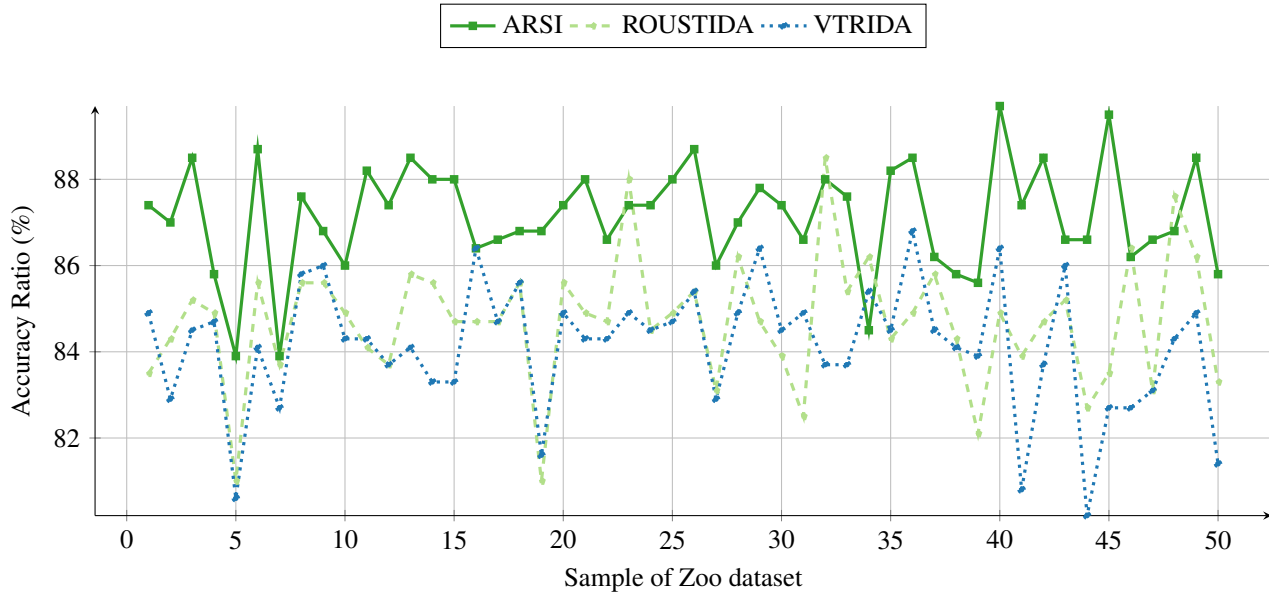


Fig. 30. Behavior of the imputation algorithms with a missing values rate of 30% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 44 runs of a total of 50 runs.

## 7. 35% of Missing Values

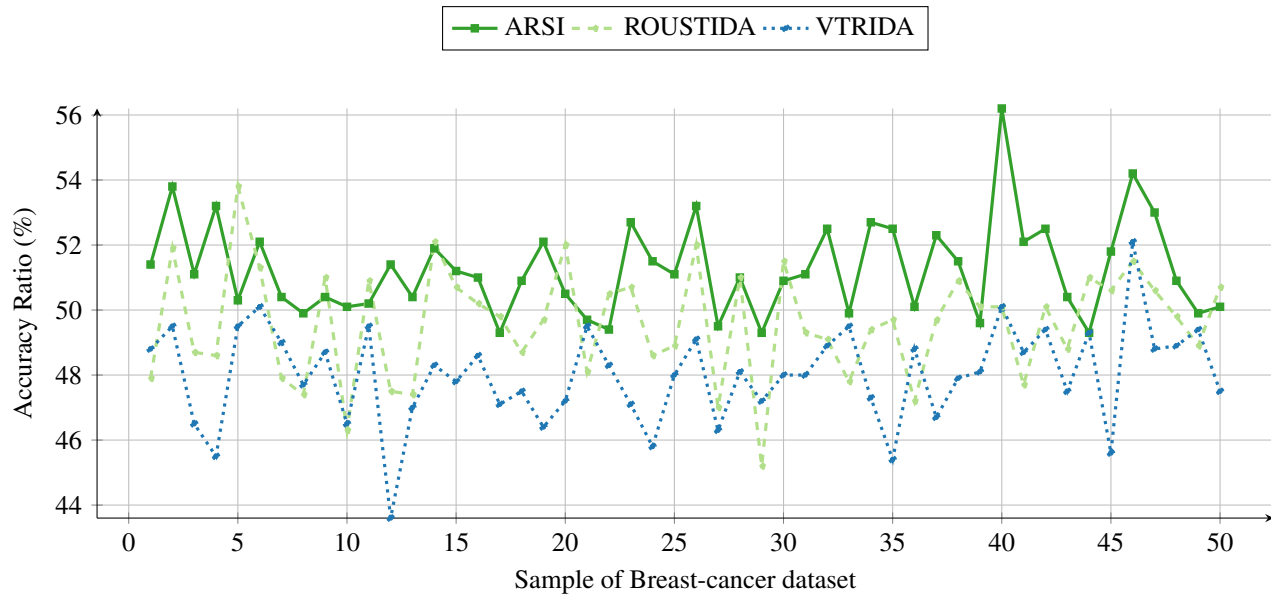


Fig. 31. Behavior of the imputation algorithms with a missing values rate of 35% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 38 runs of a total of 50 runs.

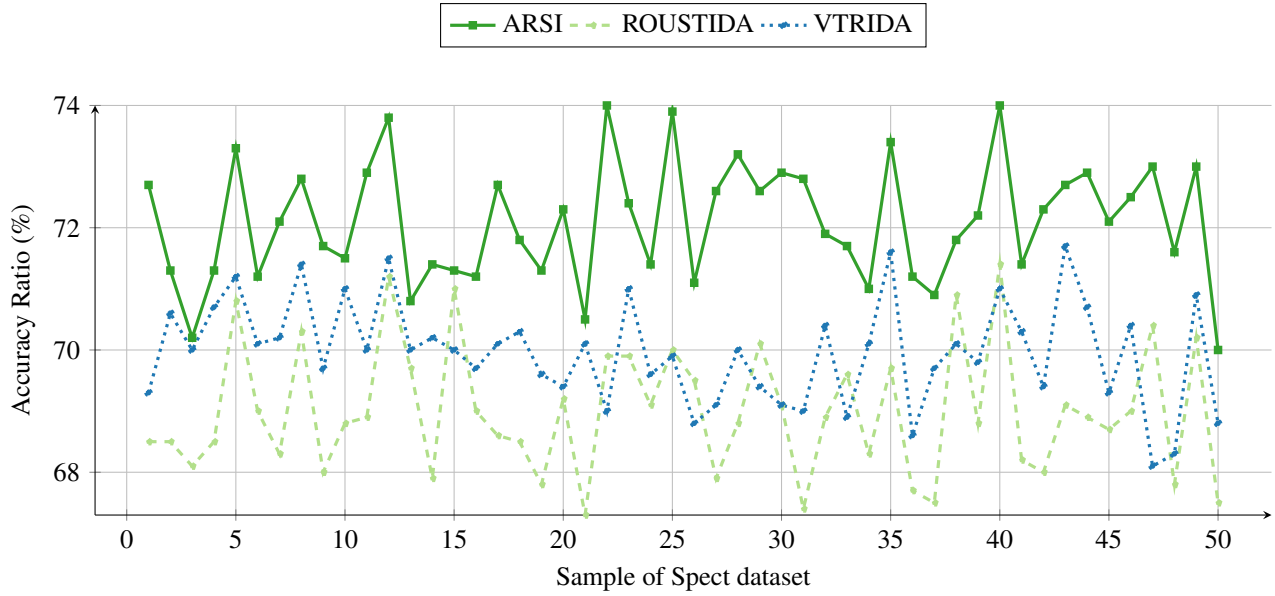


Fig. 32. Behavior of the imputation algorithms with a missing values rate of 35% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 50 runs of a total of 50 runs.

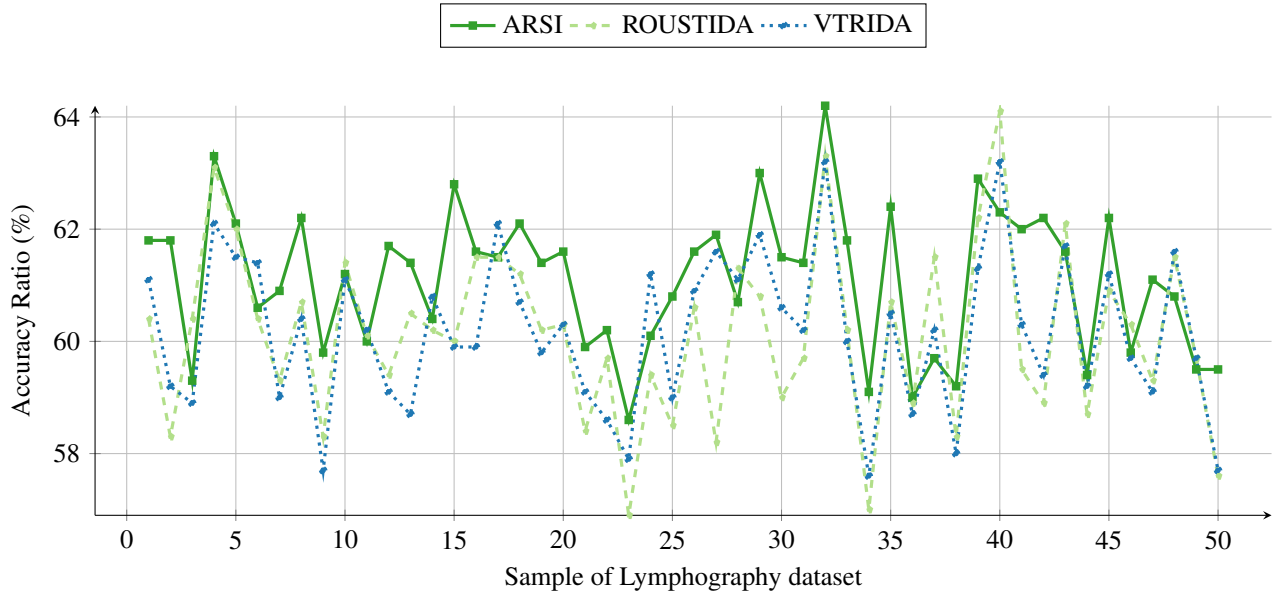


Fig. 33. Behavior of the imputation algorithms with a missing values rate of 35% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 36 runs of a total of 50 runs.

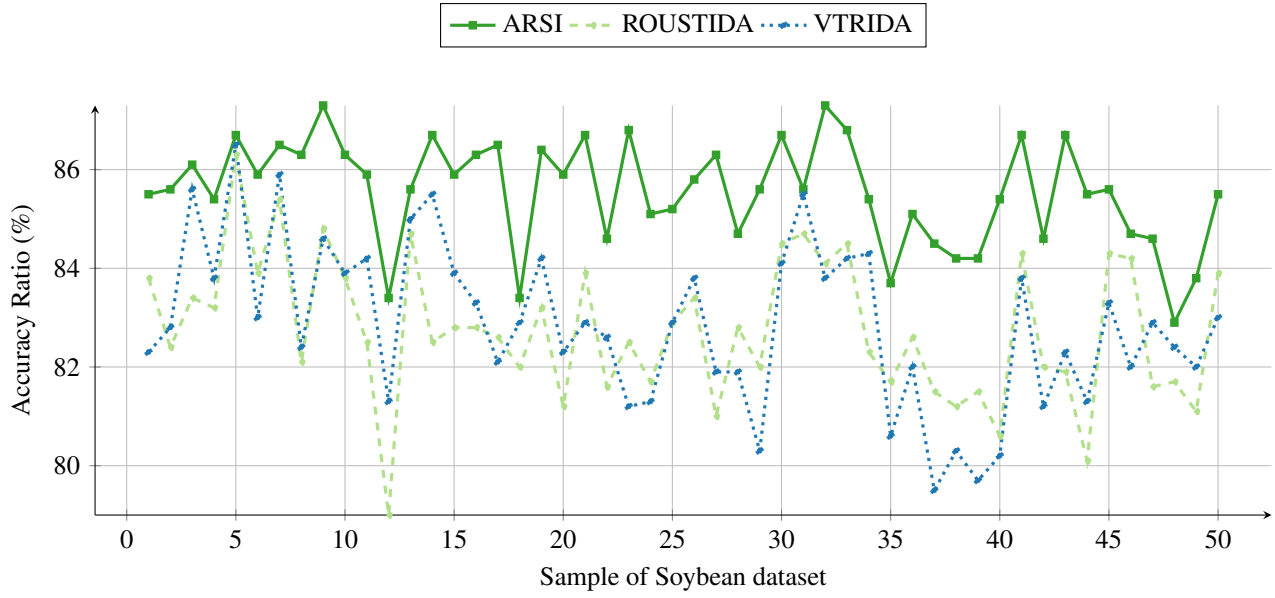


Fig. 34. Behavior of the imputation algorithms with a missing values rate of 35% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 50 runs of a total of 50 runs.

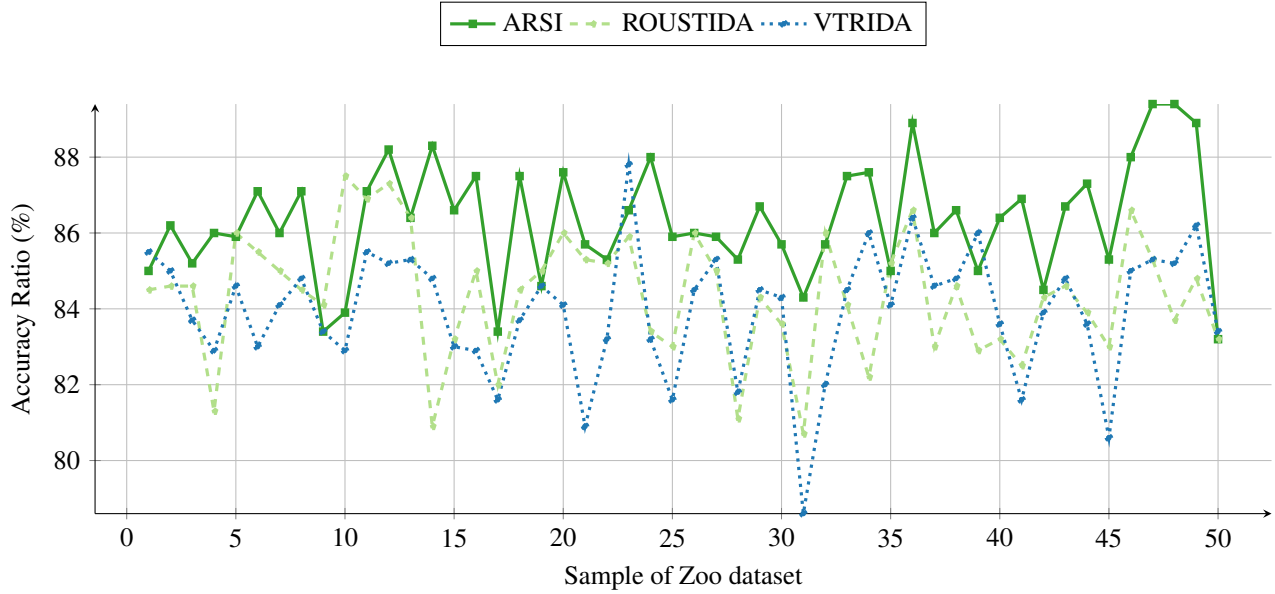


Fig. 35. Behavior of the imputation algorithms with a missing values rate of 35% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 38 runs of a total of 50 runs.

## 8. 40% of Missing Values

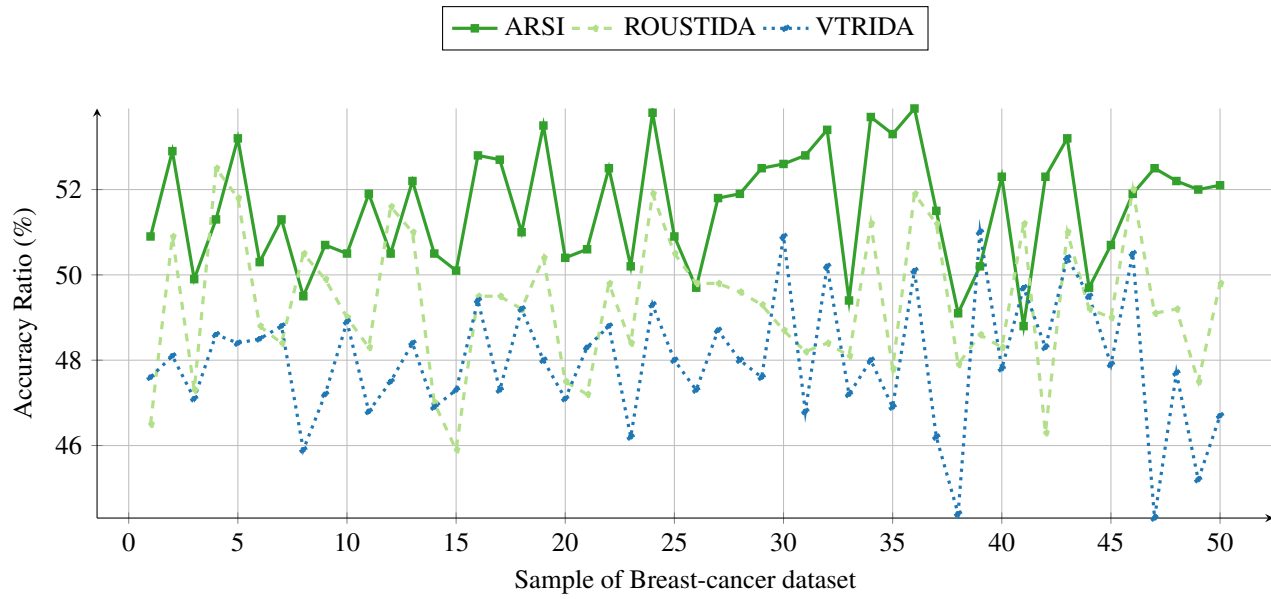


Fig. 36. Behavior of the imputation algorithms with a missing values rate of 40% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 43 runs of a total of 50 runs.

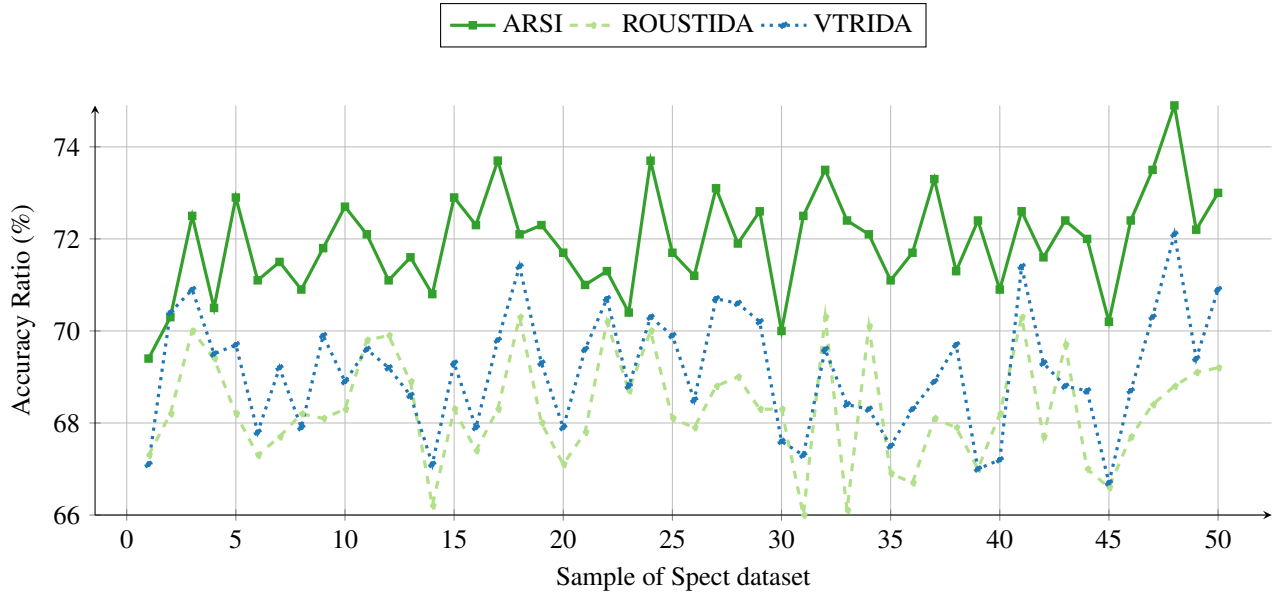


Fig. 37. Behavior of the imputation algorithms with a missing values rate of 40% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 49 runs of a total of 50 runs.

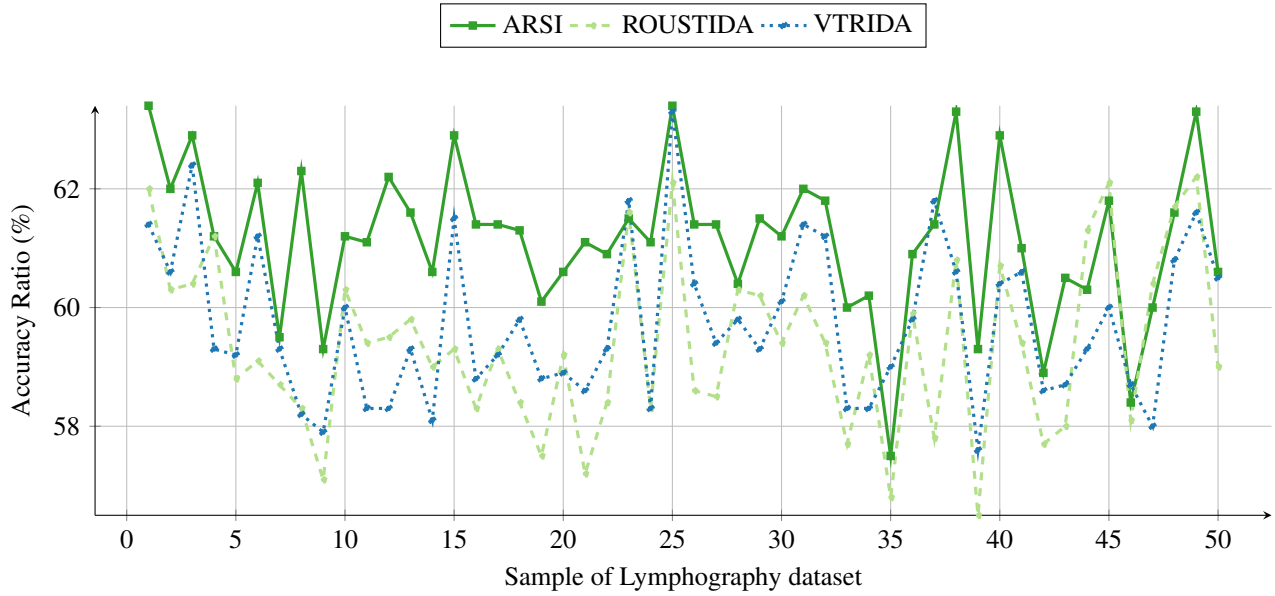


Fig. 38. Behavior of the imputation algorithms with a missing values rate of 40% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 41 runs of a total of 50 runs.

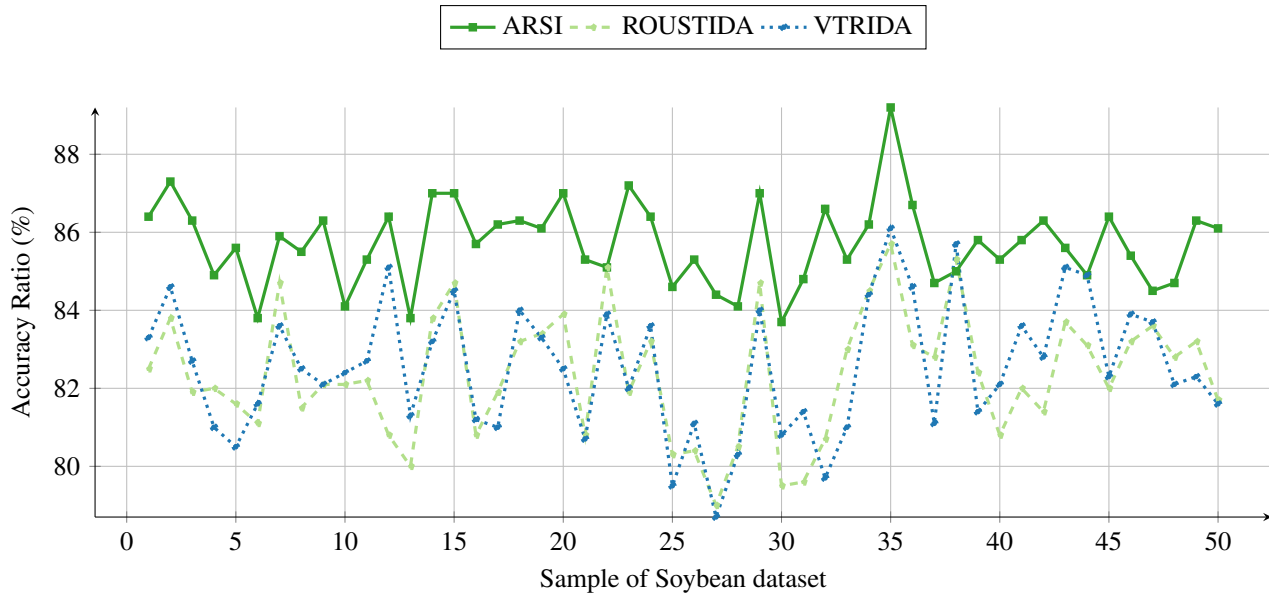


Fig. 39. Behavior of the imputation algorithms with a missing values rate of 40% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 47 runs of a total of 50 runs.

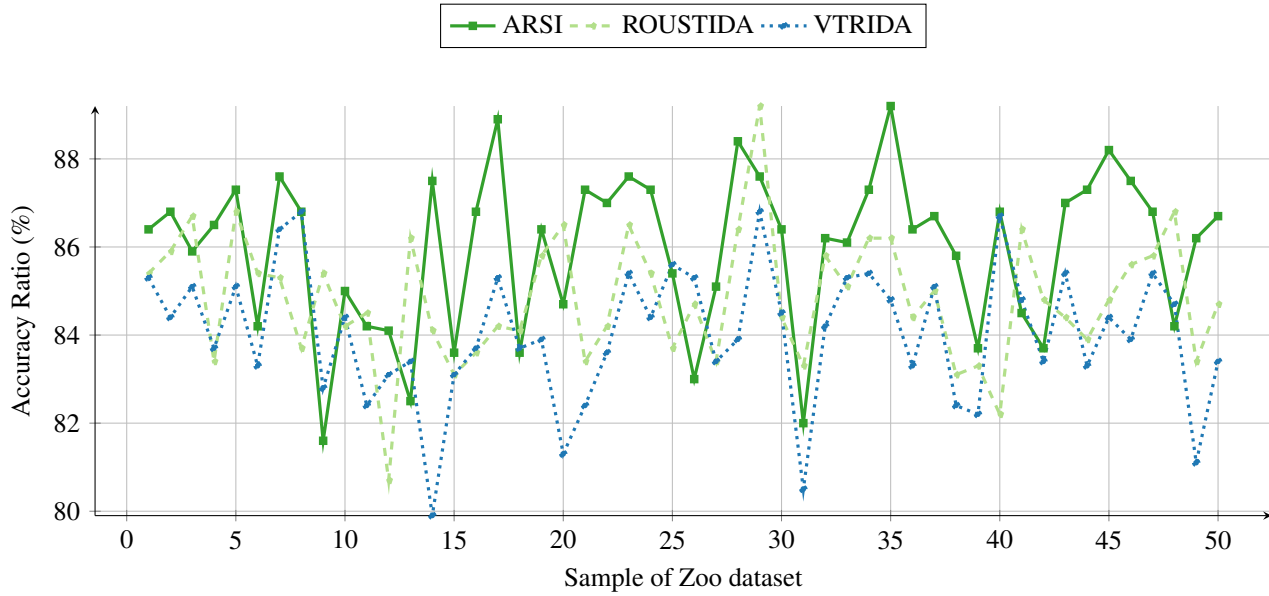


Fig. 40. Behavior of the imputation algorithms with a missing values rate of 40% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 35 runs of a total of 50 runs.



## 9. 45% of Missing Values

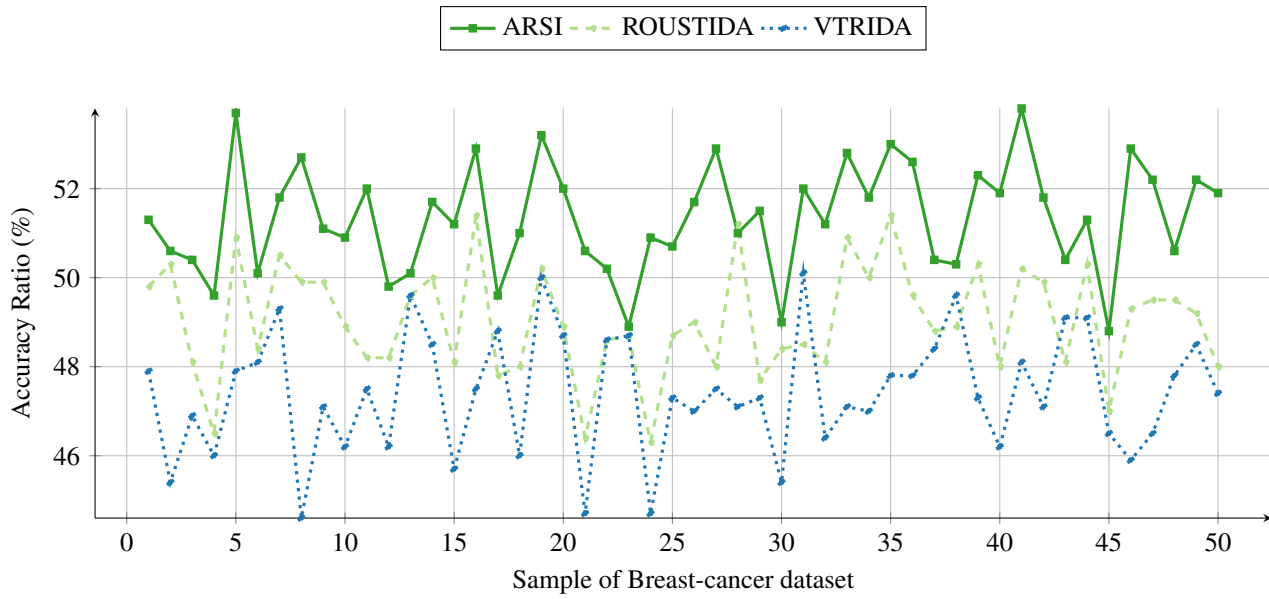


Fig. 41. Behavior of the imputation algorithms with a missing values rate of 45% in the Breast-cancer database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 49 runs of a total of 50 runs.

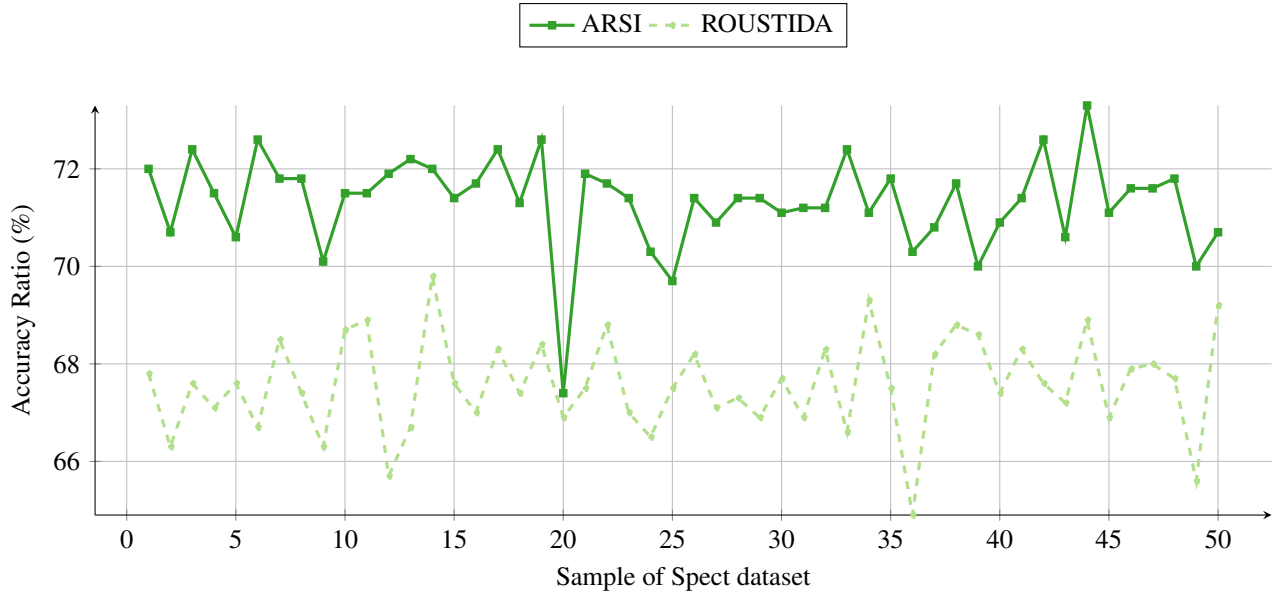


Fig. 42. Behavior of the imputation algorithms with a missing values rate of 45% in the Spect database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 50 runs of a total of 50 runs.

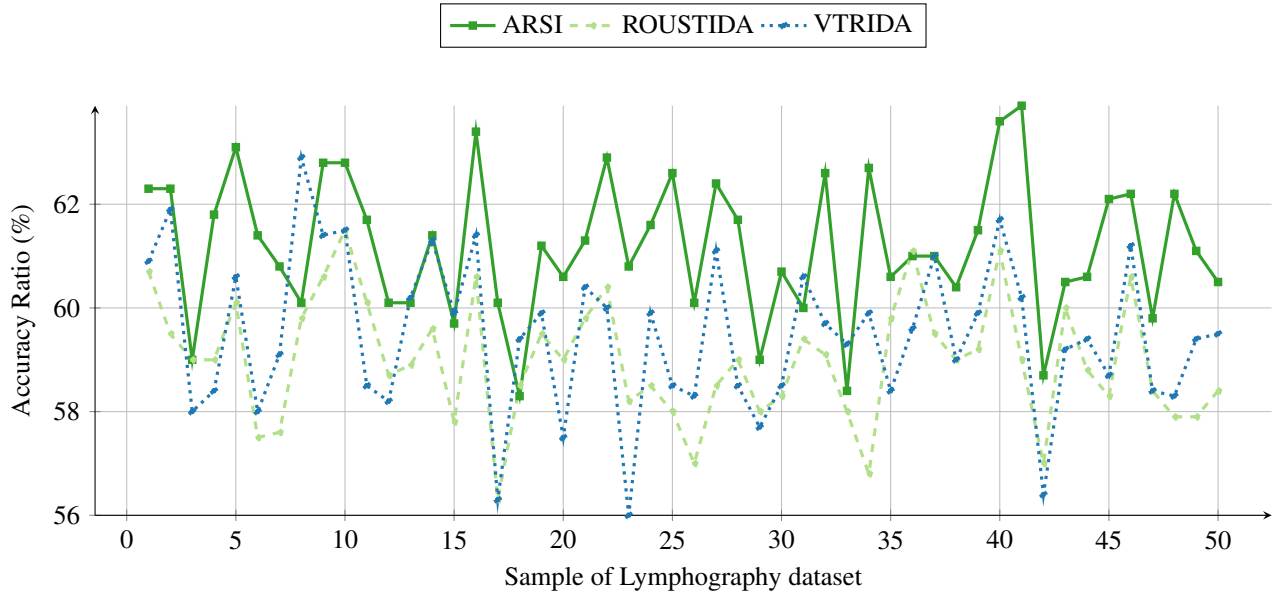


Fig. 43. Behavior of the imputation algorithms with a missing values rate of 45% in the Lymphography database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 42 runs of a total of 50 runs.

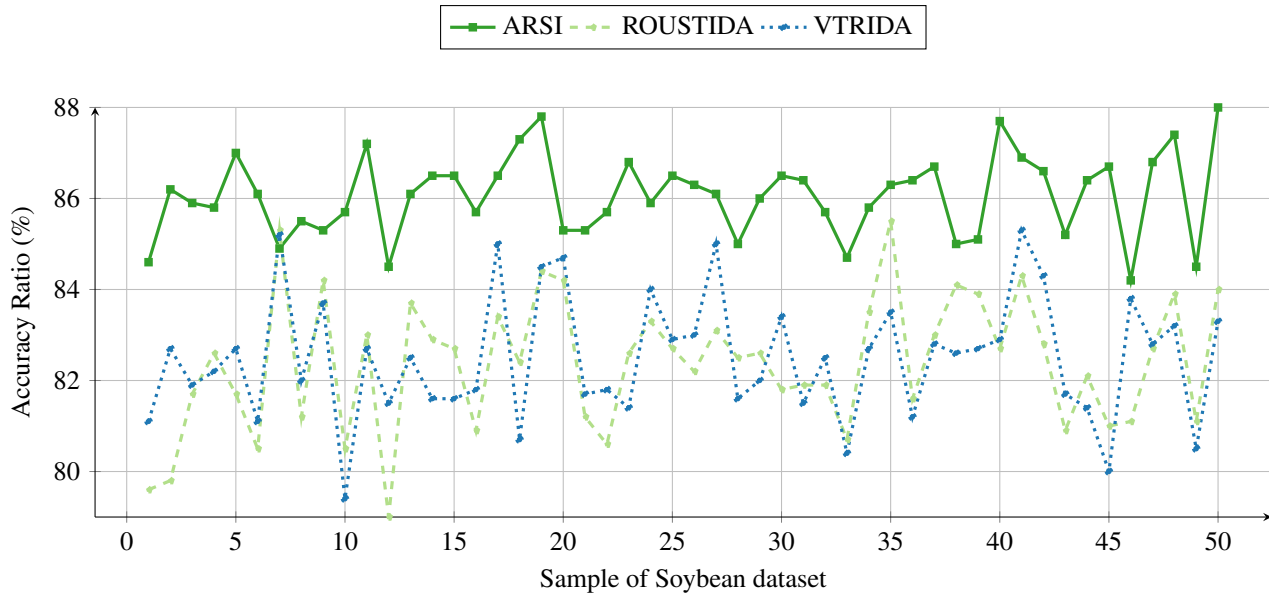


Fig. 44. Behavior of the imputation algorithms with a missing values rate of 45% in the Soybean database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 49 runs of a total of 50 runs.

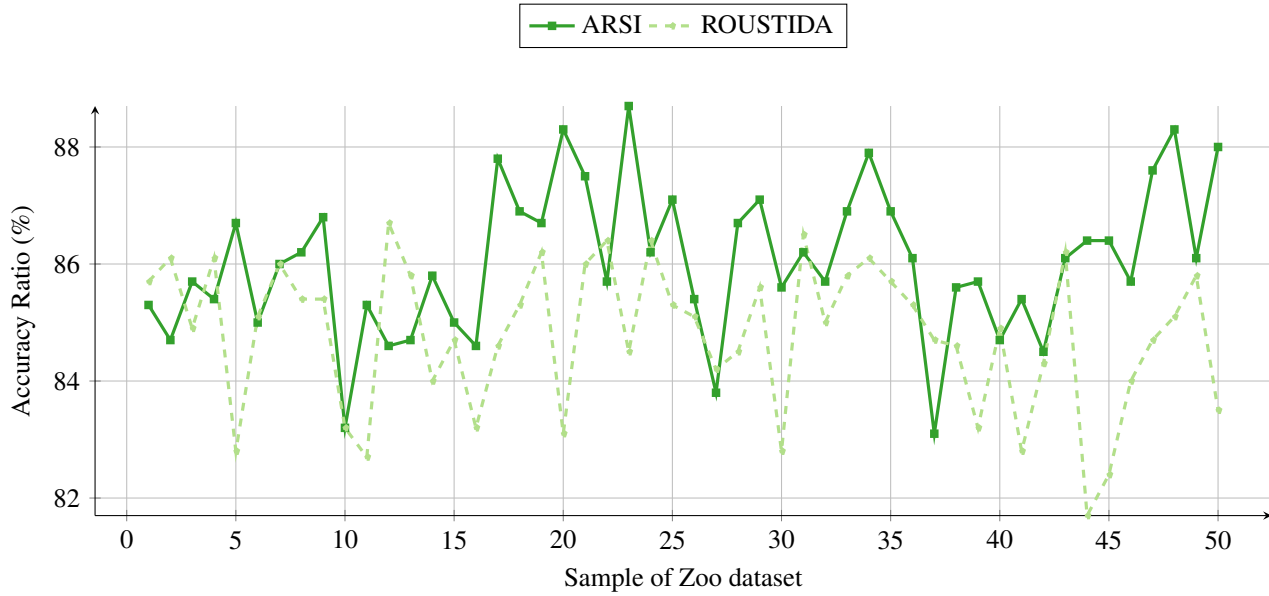


Fig. 45. Behavior of the imputation algorithms with a missing values rate of 45% in the Zoo database. The vertical axis corresponds to the accuracy rate of the respective algorithm, and the horizontal axis represents the sample number in the experiment. We observe ARSI gets the best accuracy with respect the other algorithms in 35 runs of a total of 50 runs.