

Supplementary Materials: Reliable Attribute-missing Multi-view Clustering with Instance-level and Feature-level Cooperative Imputation

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1 ADDITIONAL EXPERIMENTS

Due to space limitations, we present the results for the selected two datasets BMNC-I and SMAGE-I in the main text, as they are sufficient to illustrate the findings. In this section, we provide the complete results of all experiments.

1.1 Additional Ablation Study

The results of the ablation experiments on the remaining four datasets are consistent with the conclusion provided in the main text, as is shown in Fig. 1. Removing any module results in varying degrees of performance degradation, while the integration of all modules significantly enhances clustering performance. The consistent results across all datasets unequivocally demonstrate the effectiveness and robustness of our proposed RAM-MVC.

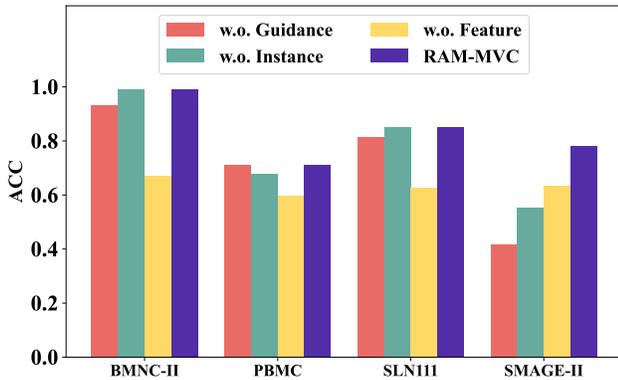


Figure 1: The ablation study of the four remaining datasets.

1.2 Additional Convergence Study

The convergence results on the remaining four datasets demonstrate a trend consistent with those described in the main text, characterized by a rapid decline followed by subsequent stabilization, as is shown in Fig. 2. Convergence is typically achieved within two iterations for most datasets, and extends to three iterations for the SMAGE-II dataset. In summary, the experimental data definitively confirm the convergence of our RAM-MVC model.

1.3 Additional Parameter Analysis

The results of the parameter sensitivity analysis correlate with our previous findings, as is shown in Fig. 3. Parameter sensitivity proved more pronounced for λ than for t , indicating the necessity for careful calibration of λ . It is important to ensure optimal performance through the selection of a suitable interval for λ .

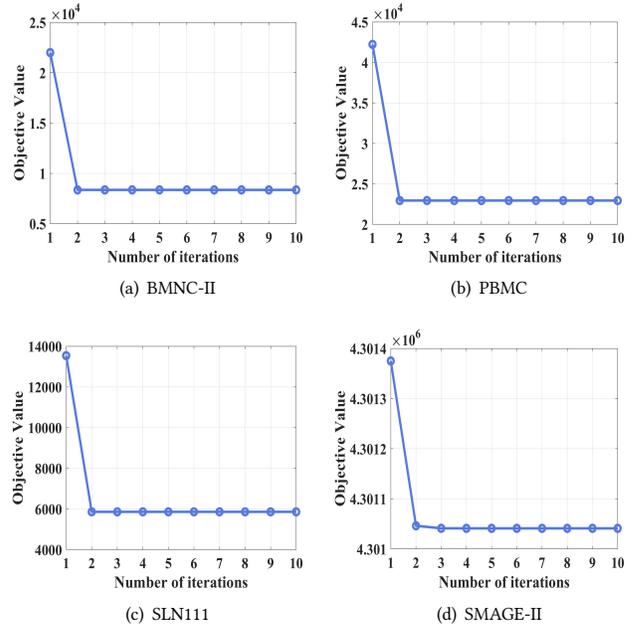


Figure 2: Objective function values recorded at each iteration for the four remaining datasets.

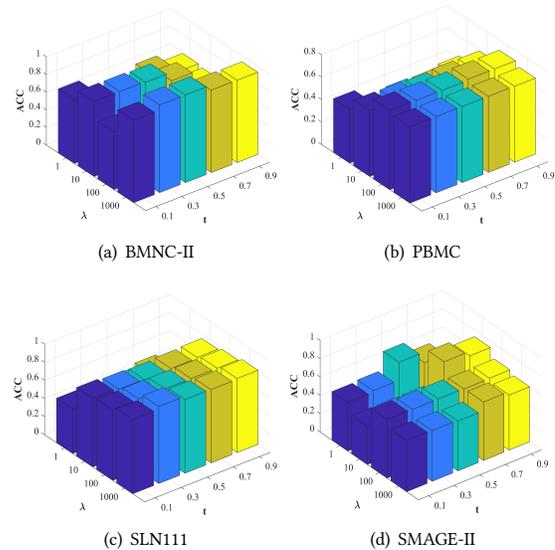


Figure 3: Parameter sensitivity analysis of the four remaining datasets.

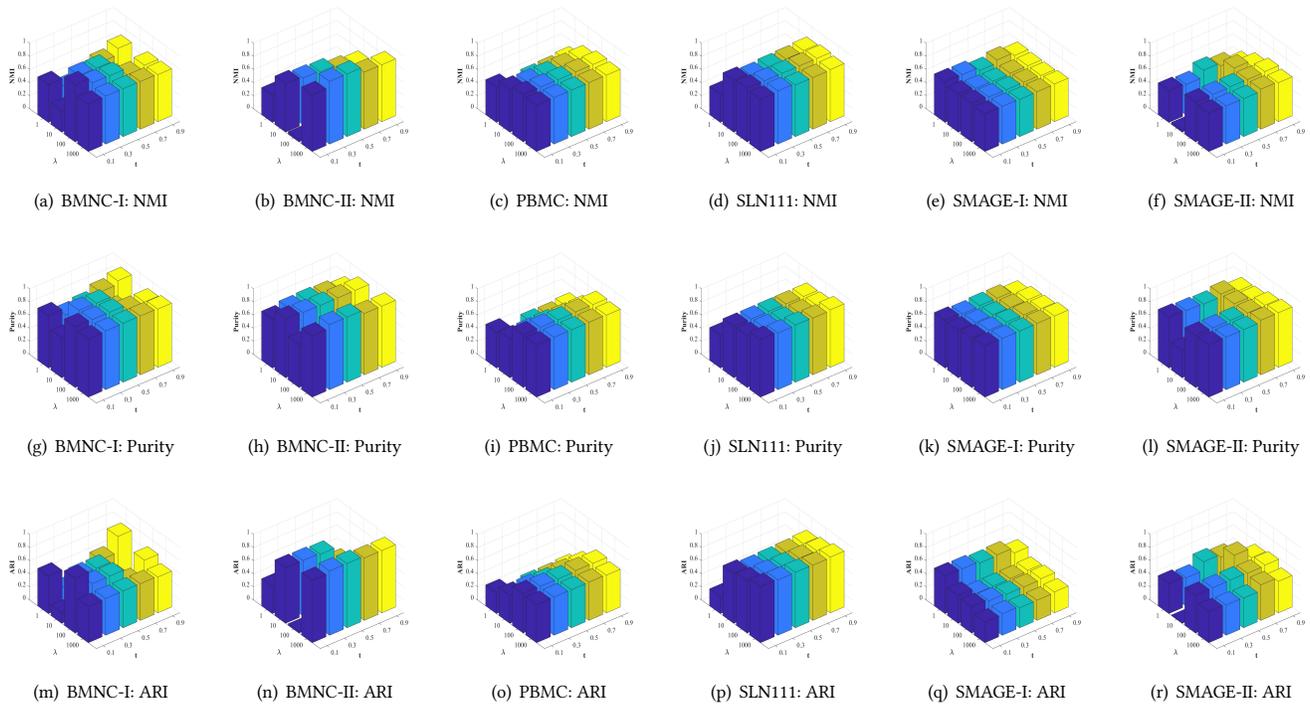


Figure 4: Parameter sensitivity analysis of the proposed RAM-MVC on all six datasets using NMI, Purity, and ARI metrics.

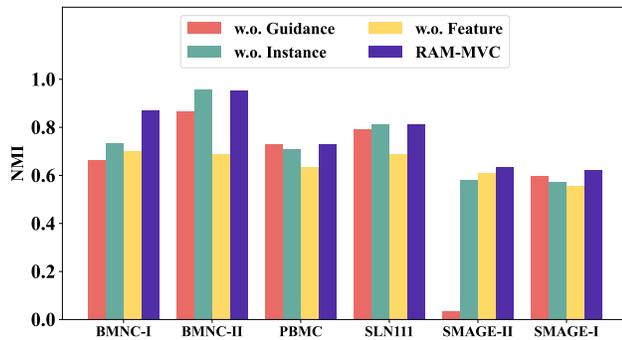


Figure 5: The ablation study conducted across all six datasets using NMI metrics.

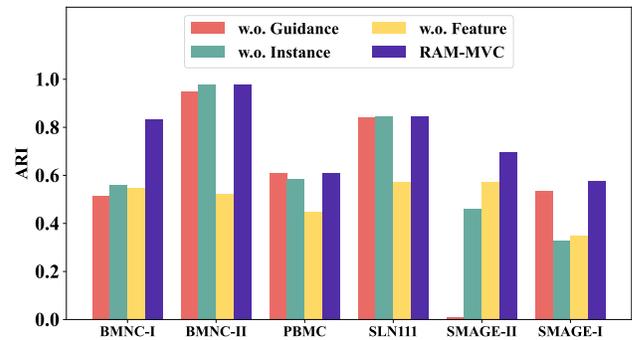


Figure 6: The ablation study conducted across all six datasets using ARI metrics.

2 COMPREHENSIVE ASSESSMENT OF RAM-MVC USING OTHER METRICS

In our experiments, we employ not only the ACC metric but also additional evaluation metrics such as NMI, Purity, and ARI to provide a comprehensive assessment of our model.

2.1 Comprehensive Parameter Analysis

As shown in Fig. 4, we present the complete results of the parameter analysis experiment. These results are evaluated across six datasets using NMI, Purity, and ARI metrics, providing comprehensive insights. Observing all these figures, a unified trend emerges: λ

exhibits parameter sensitivity, and variations in parameter ranges significantly impact clustering performance.

2.2 Comprehensive Ablation Study

Furthermore, we supplemented our findings with ablation experimental results based on NMI and ARI, shown in Fig. 5 and Fig. 6, demonstrating our proposed module's effectiveness more comprehensively.

3 PROVIDED CODE

We provide the code of RAM-MVC in the supplemental material.