

Figure 1. Workflow of the Proposed Methodology

Table 1. Results obtained by using the proposed methodology on the Maize dataset

| Technique | Accuracy | Precision | Recall | F1-Score | MCC | RMSE | Pearson Corr. |
|-------------|----------|-----------|----------|----------|----------|----------|---------------|
| DST-RoF | 0.959577 | 0.976190 | 0.811881 | 0.886486 | 0.867567 | 0.201056 | 0.867567 |
| DCT-RoF | 0.961501 | 0.987952 | 0.811881 | 0.891304 | 0.874359 | 0.196210 | 0.874359 |
| WT-RoF | 0.966314 | 0.919598 | 0.905941 | 0.912718 | 0.891887 | 0.183538 | 0.891887 |
| Hilbert-RoF | 0.976901 | 0.940594 | 0.940594 | 0.940594 | 0.926257 | 0.151984 | 0.926257 |
| Fourier-RoF | 0.981713 | 0.955224 | 0.950495 | 0.952854 | 0.941515 | 0.135229 | 0.941515 |

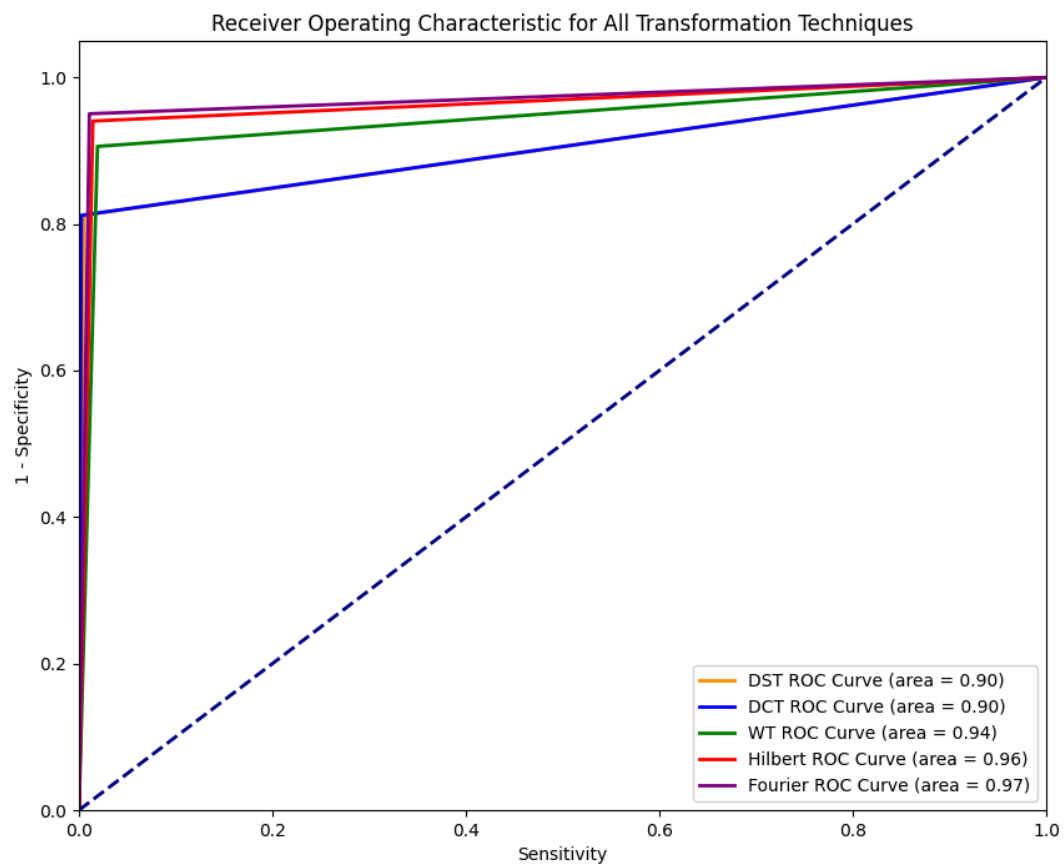


Figure 2. ROC-AUC Curves performed by the proposed method on the Maize SIPs dataset

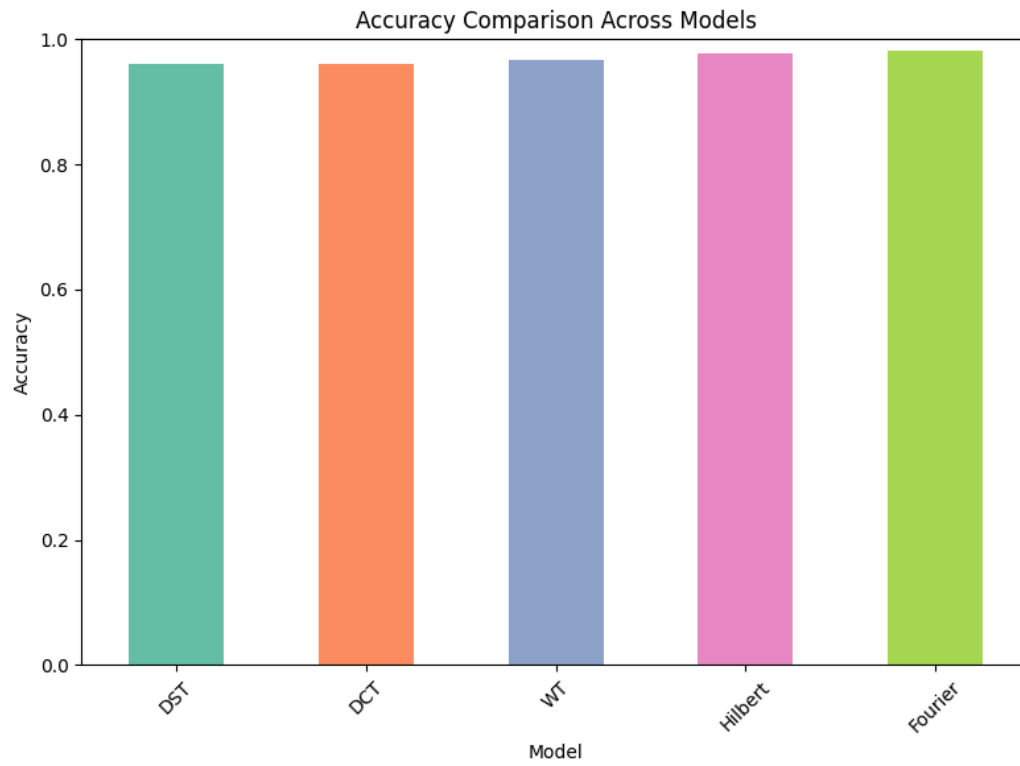


Figure 3. Accuracy Comparison of the proposed method on the Maize SIPs dataset

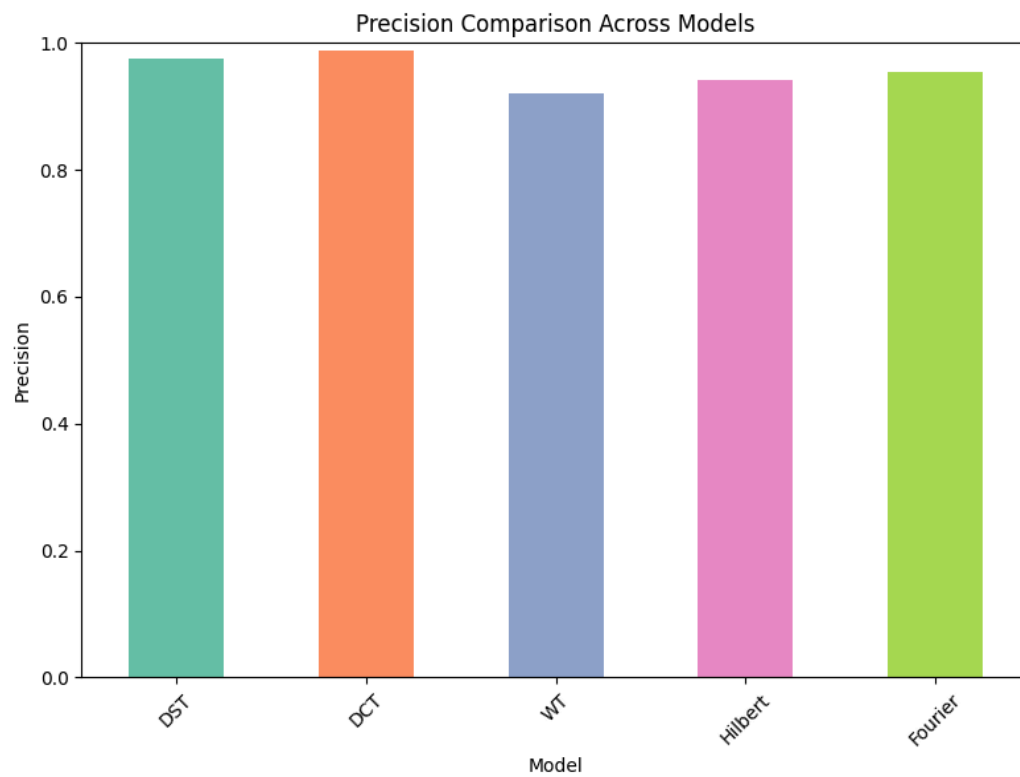


Figure 4. Precision Comparison of the proposed method on the Maize SIPs dataset

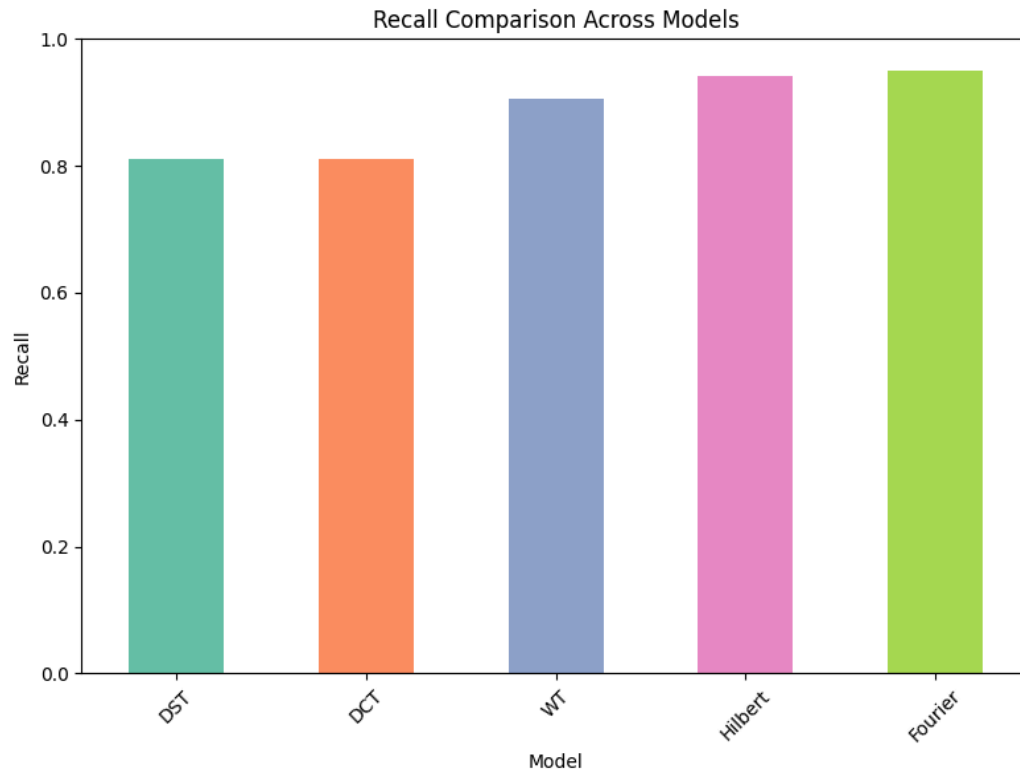


Figure 5. Recall Comparison of the proposed method on the Maize SIPs dataset

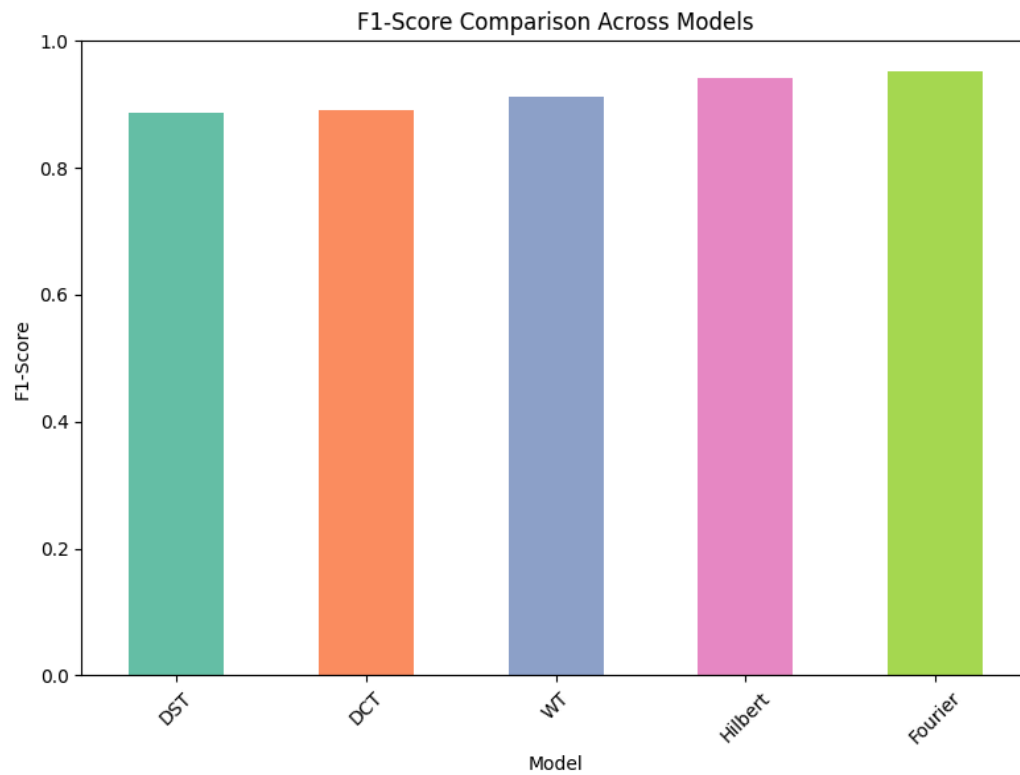


Figure 6. F1-Score Comparison of the proposed method on the Maize SIPs dataset

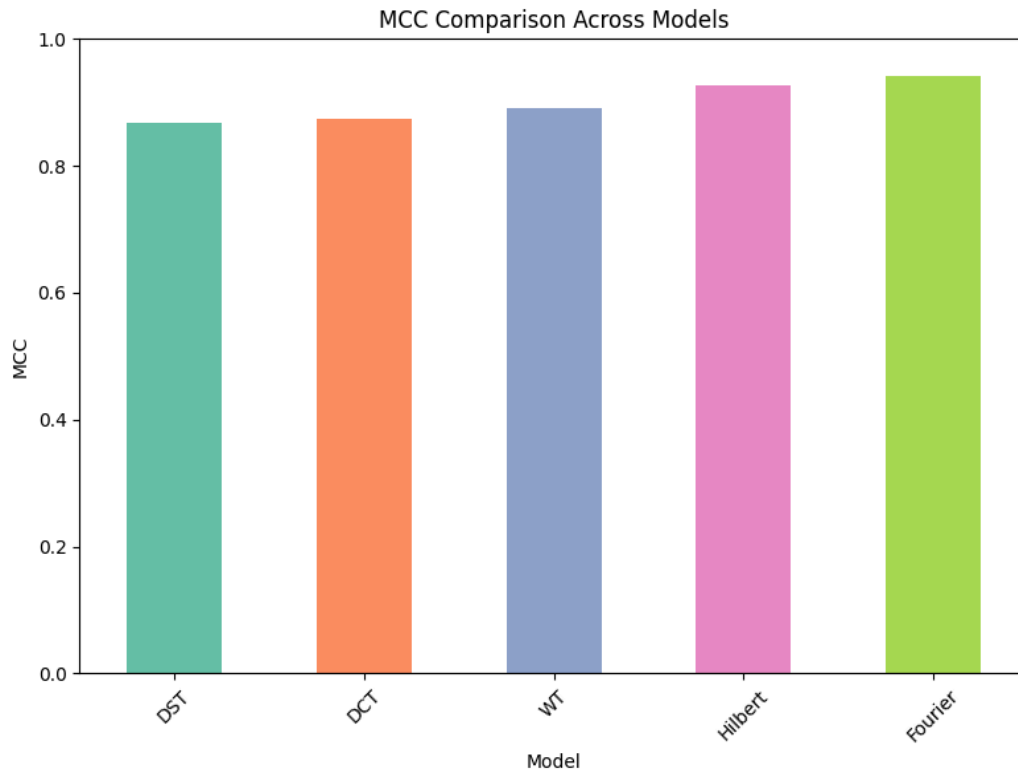


Figure 7. Matthews Correlation Coefficient Comparison of the proposed method on the Maize SIPs dataset

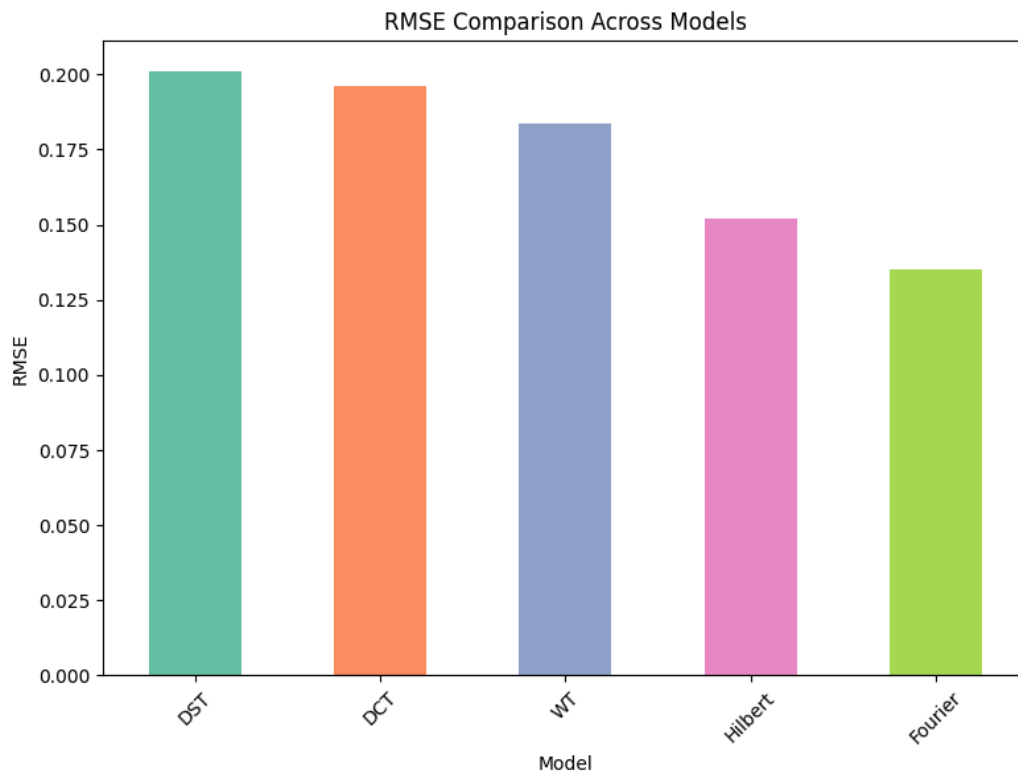


Figure 8. Root Mean Square Comparison of the proposed method on the Maize SIPs dataset

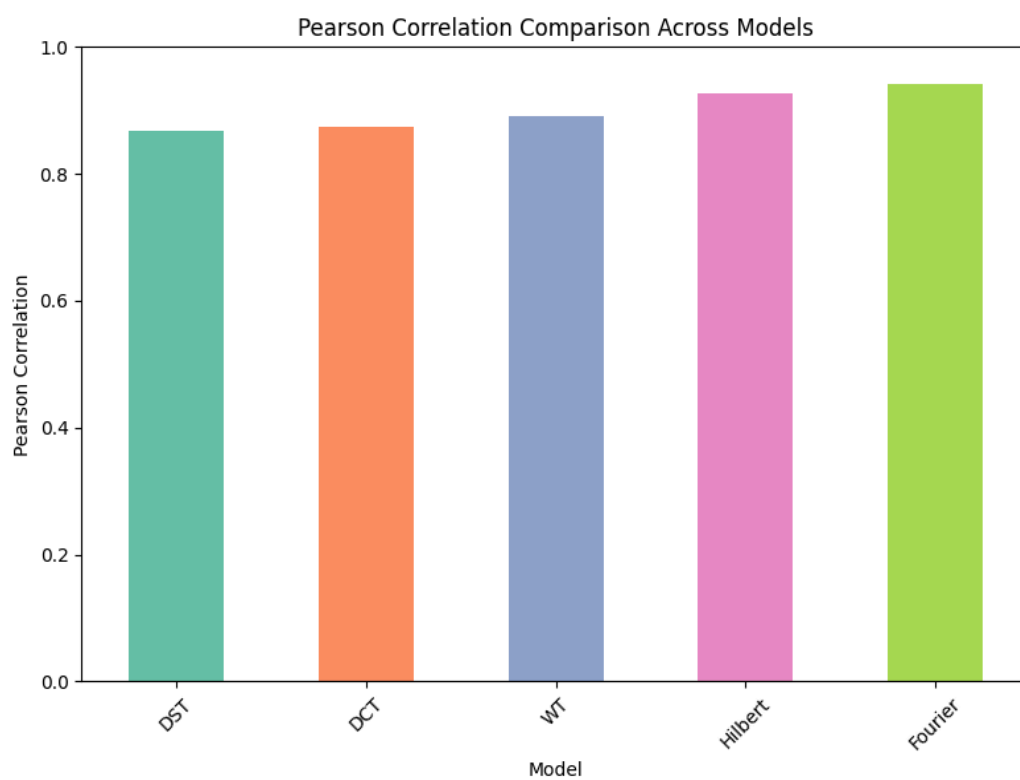


Figure 9. Pearson Correlation Coefficient Comparison of the proposed method on the Maize SIPs dataset