```
2024-10-02 01:18:59,875 - INFO - Loading test data...
2024-10-02 01:18:59,923 - INFO - Test data loaded successfully.
2024-10-02 01:18:59,924 - INFO - Loading R models...
2024-10-02 01:21:00,301 - INFO - Loading test data...
2024-10-02 01:21:00,364 - INFO - Test data loaded successfully.
2024-10-02 01:21:00,376 - INFO - Loading MAE models...
2024-10-02 01:22:56,298 - INFO - Loading test data...
2024-10-02 01:22:56,346 - INFO - Test data loaded successfully.
2024-10-02 01:22:56,353 - INFO - Loading MAE models...
2024-10-02 01:22:56,580 - INFO - MAE models loaded successfully.
2024-10-02 01:22:56,581 - INFO - Making predictions using MAE models...
2024-10-02 01:22:58,752 - INFO - Predictions made successfully using MAE models.
2024-10-02 01:22:58,753 - INFO - Loading RMSE models...
2024-10-02 01:22:58,888 - INFO - RMSE models loaded successfully.
2024-10-02 01:22:58,889 - INFO - Making predictions using RMSE models...
2024-10-02 01:23:01,081 - INFO - Predictions made successfully using RMSE
models.
2024-10-02 01:23:40,444 - INFO - Loading test data...
2024-10-02 01:23:40,497 - INFO - Test data loaded successfully.
2024-10-02 01:23:40,503 - INFO - Loading MAE models...
2024-10-02 01:23:40,653 - INFO - MAE models loaded successfully.
2024-10-02 01:23:40,654 - INFO - Making predictions using MAE models...
2024-10-02 01:23:42,991 - INFO - Predictions made successfully using MAE models.
2024-10-02 01:23:42,993 - INFO - Loading RMSE models...
2024-10-02 01:23:43,120 - INFO - RMSE models loaded successfully.
2024-10-02 01:23:43,120 - INFO - Making predictions using RMSE models...
2024-10-02 01:23:45,191 - INFO - Predictions made successfully using RMSE
models.
2024-10-02 01:23:45,193 - INFO - LSTM Predictions for MAE: [[0.9200382
0.9048626  0.9380377  ... 0.90774155 0.9484708  0.8971268 ]
 [0.9245748  0.9036465  0.9335128  ... 0.9096299  0.9453987  0.8908576 ]
 [0.92648244 0.9093925  0.93441063 ... 0.91226226 0.9502695  0.89856136]
 ...
 [0.8264682  0.9083483  0.95791936 ... 0.9005002  0.96925163 0.8640795 ]
 [0.8439106  0.9090371  0.9568298  ... 0.892611   0.9645843  0.8758998 ]
 [0.8054622  0.90837604 0.95892876 ... 0.8989943  0.9647614  0.87870526]]
2024-10-02 01:23:45,195 - INFO - GRU Predictions for MAE: [[0.95649326 0.933741
0.96280503 ... 0.8926368  0.9835138  0.89726126]
 [0.95355785 0.93389827 0.96204555 ... 0.8877131  0.9838147  0.89753133]
 [0.95484537 0.93544424 0.9642203  ... 0.8951805  0.9849668  0.9001266 ]
 ...
 [0.92824364 0.94424075 0.9712984  ... 0.91643196 0.98912674 0.87554777]
 [0.9396087  0.9450698  0.972717   ... 0.9198737  0.98775536 0.8957355 ]
 [0.92972505 0.94752824 0.973199   ... 0.9184186  0.9897701  0.8854579 ]]
2024-10-02 01:23:45,196 - INFO - LSTM Predictions for RMSE: [[0.9680094
0.913039   0.9490167  ... 0.9132228  0.9424555  0.91795594]
 [0.96934414 0.91427267 0.94876647 ... 0.91623527 0.9449497  0.9229244 ]
 [0.9679919  0.91558063 0.9507306  ... 0.915449   0.9485174  0.9230014 ]
 ...
 [0.86092407 0.91992307 0.95442814 ... 0.9093056  0.9496901  0.9139439 ]
 [0.8846336  0.92239714 0.95623934 ... 0.9061739  0.9470523  0.9052617 ]
 [0.8761585  0.9209721  0.9554107  ... 0.9130331  0.9440549  0.9077294 ]]
2024-10-02 01:23:45,197 - INFO - GRU Predictions for RMSE: [[0.9635239
0.9141842  0.9457588  ... 0.9125638  0.9429578  0.91671914]
 [0.9589681  0.9129031  0.94663197 ... 0.9102549  0.9479522  0.91782   ]
 [0.96163183 0.9162367  0.9464579  ... 0.91375417 0.9576478  0.9161924 ]
 ...
 [0.90542233 0.9194643  0.97261643 ... 0.9179031  0.96172327 0.87056386]
 [0.9045941  0.9175832  0.97503483 ... 0.9162012  0.9607769  0.8581886 ]
 [0.89687586 0.92006654 0.974013   ... 0.9202066  0.964019   0.87222564]]
2024-10-02 01:26:41,453 - INFO - Loading test data...
2024-10-02 01:26:41,505 - INFO - Test data loaded successfully.
2024-10-02 01:26:41,513 - INFO - Loading MAE models...
2024-10-02 01:26:41,674 - INFO - MAE models loaded successfully.
```

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2024-10-02 01:26:41,674 - INFO - Making predictions using MAE models...
2024-10-02 01:26:43,994 - INFO - Predictions made successfully using MAE models.
2024-10-02 01:26:43,996 - INFO - Loading RMSE models...
2024-10-02 01:26:44,108 - INFO - RMSE models loaded successfully.
2024-10-02 01:26:44,109 - INFO - Making predictions using RMSE models...
2024-10-02 01:26:46,211 - INFO - Predictions made successfully using RMSE
models.
2024-10-02 01:26:46,213 - INFO - LSTM Predictions for MAE: [[0.9200382
0.9048626  0.9380377  ... 0.90774155 0.9484708  0.8971268 ]
 [0.9245748  0.9036465  0.9335128  ... 0.9096299  0.9453987  0.8908576 ]
 [0.92648244 0.9093925  0.93441063 ... 0.91226226 0.9502695  0.89856136]
 ...
 [0.8264682  0.9083483  0.95791936 ... 0.9005002  0.96925163 0.8640795 ]
 [0.8439106  0.9090371  0.9568298  ... 0.892611   0.9645843  0.8758998 ]
 [0.8054622  0.90837604 0.95892876 ... 0.8989943  0.9647614  0.87870526]]
2024-10-02 01:26:46,214 - INFO - GRU Predictions for MAE: [[0.95649326 0.933741
0.96280503 ... 0.8926368  0.9835138  0.89726126]
 [0.95355785 0.93389827 0.96204555 ... 0.8877131  0.9838147  0.89753133]
 [0.95484537 0.93544424 0.9642203  ... 0.8951805  0.9849668  0.9001266 ]
 ...
 [0.92824364 0.94424075 0.9712984  ... 0.91643196 0.98912674 0.87554777]
 [0.9396087  0.9450698  0.972717   ... 0.9198737  0.98775536 0.8957355 ]
 [0.92972505 0.94752824 0.973199   ... 0.9184186  0.9897701  0.8854579 ]]
2024-10-02 01:26:46,215 - INFO - LSTM Predictions for RMSE: [[0.9680094
0.913039   0.9490167  ... 0.9132228  0.9424555  0.91795594]
 [0.96934414 0.91427267 0.94876647 ... 0.91623527 0.9449497  0.9229244 ]
 [0.9679919  0.91558063 0.9507306  ... 0.915449   0.9485174  0.9230014 ]
 ...
 [0.86092407 0.91992307 0.95442814 ... 0.9093056  0.9496901  0.9139439 ]
 [0.8846336  0.92239714 0.95623934 ... 0.9061739  0.9470523  0.9052617 ]
 [0.8761585  0.9209721  0.9554107  ... 0.9130331  0.9440549  0.9077294 ]]
2024-10-02 01:26:46,217 - INFO - GRU Predictions for RMSE: [[0.9635239
0.9141842  0.9457588  ... 0.9125638  0.9429578  0.91671914]
 [0.9589681  0.9129031  0.94663197 ... 0.9102549  0.9479522  0.91782   ]
 [0.96163183 0.9162367  0.9464579  ... 0.91375417 0.9576478  0.9161924 ]
 ...
 [0.90542233 0.9194643  0.97261643 ... 0.9179031  0.96172327 0.87056386]
 [0.9045941  0.9175832  0.97503483 ... 0.9162012  0.9607769  0.8581886 ]
 [0.89687586 0.92006654 0.974013   ... 0.9202066  0.964019   0.87222564]]
2024-10-02 01:28:13,219 - INFO - Loading test data...
2024-10-02 01:28:13,264 - INFO - Test data loaded successfully.
2024-10-02 01:28:13,269 - INFO - Loading MAE models...
2024-10-02 01:28:13,401 - INFO - MAE models loaded successfully.
2024-10-02 01:28:13,402 - INFO - Making predictions using MAE models...
2024-10-02 01:28:15,417 - INFO - Predictions made successfully using MAE models.
2024-10-02 01:28:15,418 - INFO - Loading RMSE models...
2024-10-02 01:28:15,532 - INFO - RMSE models loaded successfully.
2024-10-02 01:28:15,533 - INFO - Making predictions using RMSE models...
2024-10-02 01:28:17,725 - INFO - Predictions made successfully using RMSE
models.
2024-10-02 01:28:17,726 - INFO - LSTM Predictions: 0
2024-10-02 01:28:17,728 - INFO - GRU Predictions: 0
2024-10-02 01:28:17,729 - INFO - LSTM Predictions for MAE: [[0.9200382
0.9048626  0.9380377  ... 0.90774155 0.9484708  0.8971268 ]
 [0.9245748  0.9036465  0.9335128  ... 0.9096299  0.9453987  0.8908576 ]
 [0.92648244 0.9093925  0.93441063 ... 0.91226226 0.9502695  0.89856136]
 ...
 [0.8264682  0.9083483  0.95791936 ... 0.9005002  0.96925163 0.8640795 ]
 [0.8439106  0.9090371  0.9568298  ... 0.892611   0.9645843  0.8758998 ]
 [0.8054622  0.90837604 0.95892876 ... 0.8989943  0.9647614  0.87870526]]
2024-10-02 01:28:17,730 - INFO - GRU Predictions for MAE: [[0.95649326 0.933741
0.96280503 ... 0.8926368  0.9835138  0.89726126]
 [0.95355785 0.93389827 0.96204555 ... 0.8877131  0.9838147  0.89753133]
 [0.95484537 0.93544424 0.9642203  ... 0.8951805  0.9849668  0.9001266 ]
```

```
      ...
     [0.92824364 0.94424075 0.9712984  ... 0.91643196 0.98912674 0.87554777]
     [0.9396087  0.9450698  0.972717   ... 0.9198737  0.98775536 0.8957355 ]
     [0.92972505 0.94752824 0.973199   ... 0.9184186  0.9897701  0.8854579 ]]
2024-10-02 01:28:17,731 - INFO - LSTM Predictions for RMSE: [[0.9680094
0.913039   0.9490167  ... 0.9132228  0.9424555  0.91795594]
     [0.96934414 0.91427267 0.94876647 ... 0.91623527 0.9449497  0.9229244 ]
     [0.9679919  0.91558063 0.9507306  ... 0.915449   0.9485174  0.9230014 ]
      ...
     [0.86092407 0.91992307 0.95442814 ... 0.9093056  0.9496901  0.9139439 ]
     [0.8846336  0.92239714 0.95623934 ... 0.9061739  0.9470523  0.9052617 ]
     [0.8761585  0.9209721  0.9554107  ... 0.9130331  0.9440549  0.9077294 ]]
2024-10-02 01:28:17,732 - INFO - GRU Predictions for RMSE: [[0.9635239
0.9141842  0.9457588  ... 0.9125638  0.9429578  0.91671914]
     [0.9589681  0.9129031  0.94663197 ... 0.9102549  0.9479522  0.91782   ]
     [0.96163183 0.9162367  0.9464579  ... 0.91375417 0.9576478  0.9161924 ]
      ...
     [0.90542233 0.9194643  0.97261643 ... 0.9179031  0.96172327 0.87056386]
     [0.9045941  0.9175832  0.97503483 ... 0.9162012  0.9607769  0.8581886 ]
     [0.89687586 0.92006654 0.974013   ... 0.9202066  0.964019   0.87222564]]
2024-10-02 01:30:31,617 - INFO - Loading test data...
2024-10-02 01:30:31,665 - INFO - Test data loaded successfully.
2024-10-02 01:30:31,672 - INFO - Loading MAE models...
2024-10-02 01:30:31,812 - INFO - MAE models loaded successfully.
2024-10-02 01:30:31,813 - INFO - Making predictions using MAE models...
2024-10-02 01:30:34,204 - INFO - Predictions made successfully using MAE models.
2024-10-02 01:30:34,206 - INFO - Loading RMSE models...
2024-10-02 01:30:34,322 - INFO - RMSE models loaded successfully.
2024-10-02 01:30:34,324 - INFO - Making predictions using RMSE models...
2024-10-02 01:30:36,661 - INFO - Predictions made successfully using RMSE
models.
2024-10-02 01:30:36,663 - INFO - LSTM Predictions for MAE: [[0.9200382
0.9048626  0.9380377  ... 0.90774155 0.9484708  0.8971268 ]
     [0.9245748  0.9036465  0.9335128  ... 0.9096299  0.9453987  0.8908576 ]
     [0.92648244 0.9093925  0.93441063 ... 0.91226226 0.9502695  0.89856136]
      ...
     [0.8264682  0.9083483  0.95791936 ... 0.9005002  0.96925163 0.8640795 ]
     [0.8439106  0.9090371  0.9568298  ... 0.892611   0.9645843  0.8758998 ]
     [0.8054622  0.90837604 0.95892876 ... 0.8989943  0.9647614  0.87870526]]
2024-10-02 01:30:36,664 - INFO - GRU Predictions for MAE: [[0.95649326 0.933741
0.96280503 ... 0.8926368  0.9835138  0.89726126]
     [0.95355785 0.93389827 0.96204555 ... 0.8877131  0.9838147  0.89753133]
     [0.95484537 0.93544424 0.9642203  ... 0.8951805  0.9849668  0.9001266 ]
      ...
     [0.92824364 0.94424075 0.9712984  ... 0.91643196 0.98912674 0.87554777]
     [0.9396087  0.9450698  0.972717   ... 0.9198737  0.98775536 0.8957355 ]
     [0.92972505 0.94752824 0.973199   ... 0.9184186  0.9897701  0.8854579 ]]
2024-10-02 01:30:36,665 - INFO - LSTM Predictions for RMSE: [[0.9680094
0.913039   0.9490167  ... 0.9132228  0.9424555  0.91795594]
     [0.96934414 0.91427267 0.94876647 ... 0.91623527 0.9449497  0.9229244 ]
     [0.9679919  0.91558063 0.9507306  ... 0.915449   0.9485174  0.9230014 ]
      ...
     [0.86092407 0.91992307 0.95442814 ... 0.9093056  0.9496901  0.9139439 ]
     [0.8846336  0.92239714 0.95623934 ... 0.9061739  0.9470523  0.9052617 ]
     [0.8761585  0.9209721  0.9554107  ... 0.9130331  0.9440549  0.9077294 ]]
2024-10-02 01:30:36,666 - INFO - GRU Predictions for RMSE: [[0.9635239
0.9141842  0.9457588  ... 0.9125638  0.9429578  0.91671914]
     [0.9589681  0.9129031  0.94663197 ... 0.9102549  0.9479522  0.91782   ]
     [0.96163183 0.9162367  0.9464579  ... 0.91375417 0.9576478  0.9161924 ]
      ...
     [0.90542233 0.9194643  0.97261643 ... 0.9179031  0.96172327 0.87056386]
     [0.9045941  0.9175832  0.97503483 ... 0.9162012  0.9607769  0.8581886 ]
     [0.89687586 0.92006654 0.974013   ... 0.9202066  0.964019   0.87222564]]
2024-10-02 01:30:36,670 - INFO - Predictions saved to predictions.txt
```