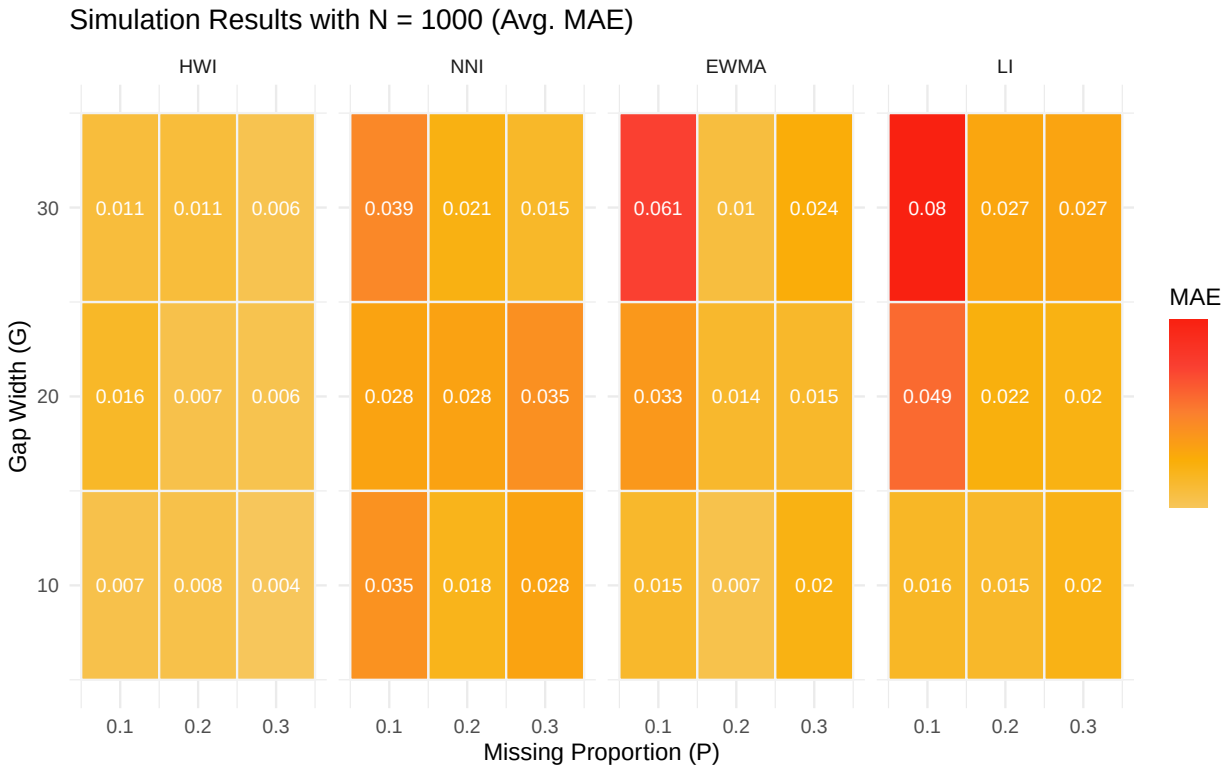
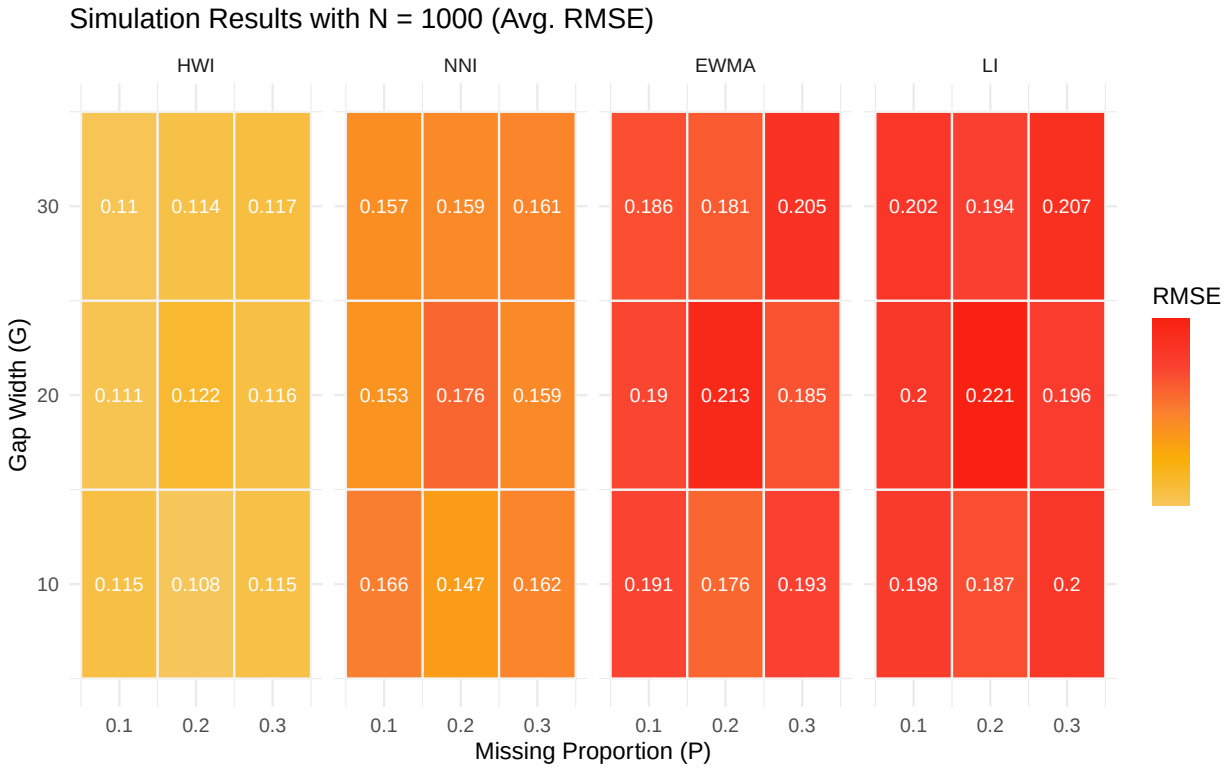
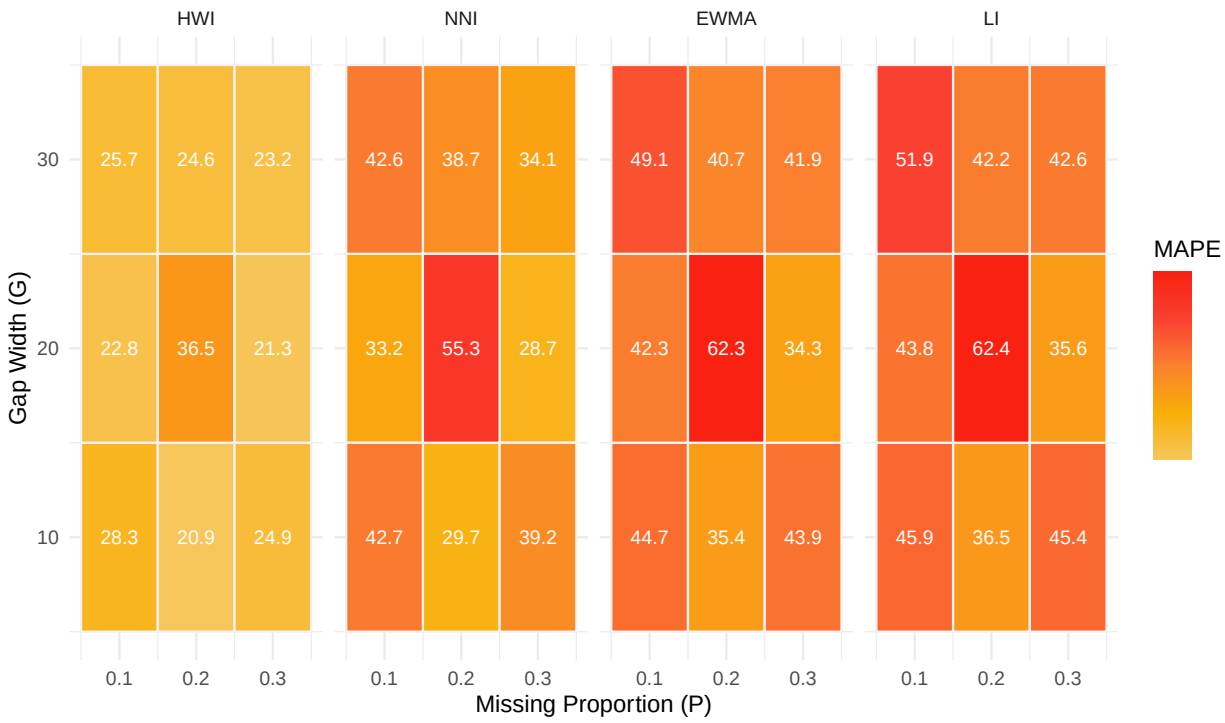
Simulation Results

First Set of Simulations:

- All time series of length $N = 1000$.
- Five iterations with each combination of (P, G).
- Comparison of average RMSE, MAE, and MAPE across each Method, P, and G combination.
- Used several different parameter combinations for the NNI method. For results, extracted the highest performing NNI model on average within each (P, G) combination.




Simulation Results with N = 1000 (Avg. RMSE)
HWI
NNI
EWMA
LI
Gap Width (G)
30
20
10
0.11 0.114 0.117
0.157 0.159 0.161
0.186 0.181 0.205
0.202 0.194 0.207
0.111 0.122 0.116
0.153 0.176 0.159
0.19 0.213 0.185
0.2 0.221 0.196
0.115 0.108 0.115
0.166 0.147 0.162
0.191 0.176 0.193
0.198 0.187 0.2
0.1 0.2 0.3
Missing Proportion (P)
RMSE


Simulation Results with N = 1000 (Avg. MAPE)
HWI
NNI
EWMA
LI
Gap Width (G)
30
20
10
25.7 24.6 23.2
42.6 38.7 34.1
49.1 40.7 41.9
51.9 42.2 42.6
22.8 36.5 21.3
33.2 55.3 28.7
42.3 62.3 34.3
43.8 62.4 35.6
28.3 20.9 24.9
42.7 29.7 39.2
44.7 35.4 43.9
45.9 36.5 45.4
0.1 0.2 0.3
Missing Proportion (P)
MAPE

Second Set of Simulations:

- All time series of length $N = 1000$.
- 10 iterations with each combination of (P, G).
- Comparison of average RMSE, MAE, and MAPE across each Method, P, and G combination.
- Too many issues with the HWI error (same one as last week) so I had to omit it from this set of simulations.
- Used a single set of parameters for the NNI based on the dominant parameters in the first set of simulations (Standouts: 'random' == FALSE, 'method' == noise, larger amount of training data).