Characteristics of CNN	Total number of FLOPs	Total number of trainable parameters	Total number of neurons	The memory allocated by the activation functions	Input image size	Total number of layers
R-squared value	0.931	0.443	0.494	0.499	0.096	0.040

Table 1: R-squared value of different CNN characteristics

Characteristics of CNN	Total number of FLOPs	Total number of trainable parameters	Total number of neurons	The memory allocated by the activation functions	Input image size	Total number of layers
Adjusted R-squared value	0.930	0.970	0.986	0.986	0.986	0.987

Table 2: Adjusted R-squared value of CNN characteristics

	OLS	RF	MLP	SVR	XGBoost
Training Time (s)	0.01	7.71	86.51	3.87	155.63
Prediction Latency (ms)	0.68	5.37	53.54	3.12	3.07

Table 3: Training Time and Prediction Latency

	OLS	RF	MLP	SVR	XGBoost
Training Time (s)	0.01	7.71	86.51	3.87	155.63
Prediction Latency (ms)	0.68	5.37	53.54	3.12	3.07
MAPE in Predicting NCV (%)	7.39	6.05	14.23	5.1	5.92
MAPE in Predicting NCA (%)	3.84	15.19	16.17	11.22	10.25
Average MAPE (%)	5.62	10.62	15.2	8.16	8.09

Table 4: Prediction models analysis: Accuracy, Training time, Prediction Latency

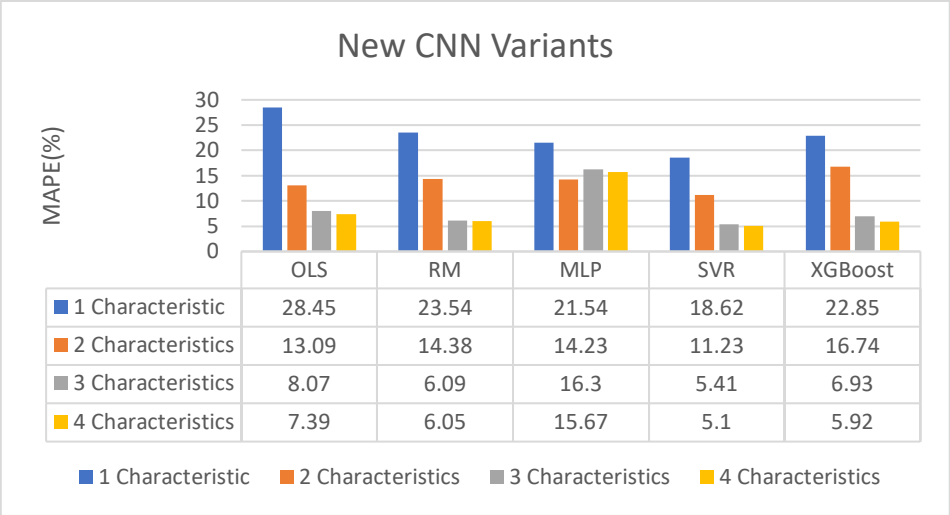


Figure 1: Prediction errors in predicting NCV

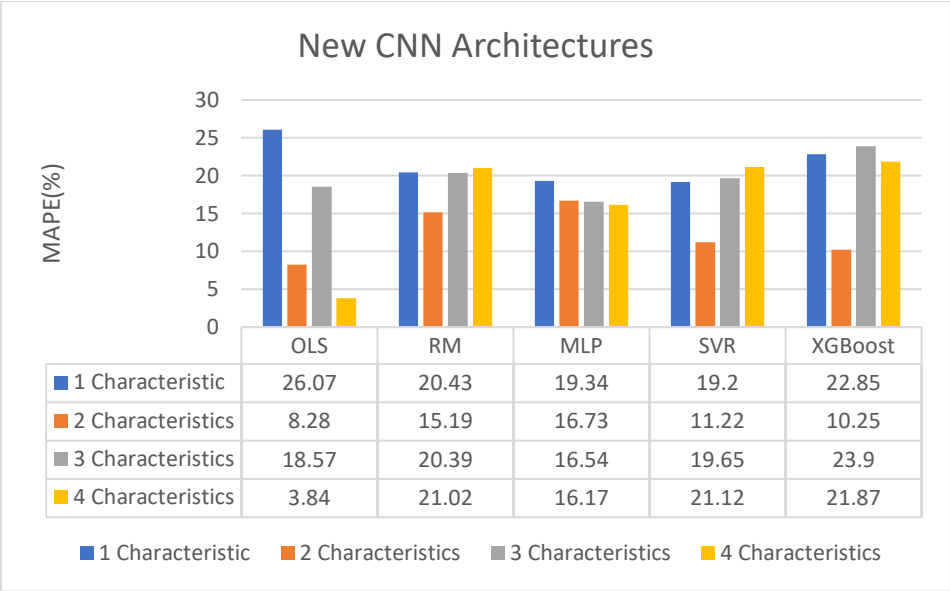
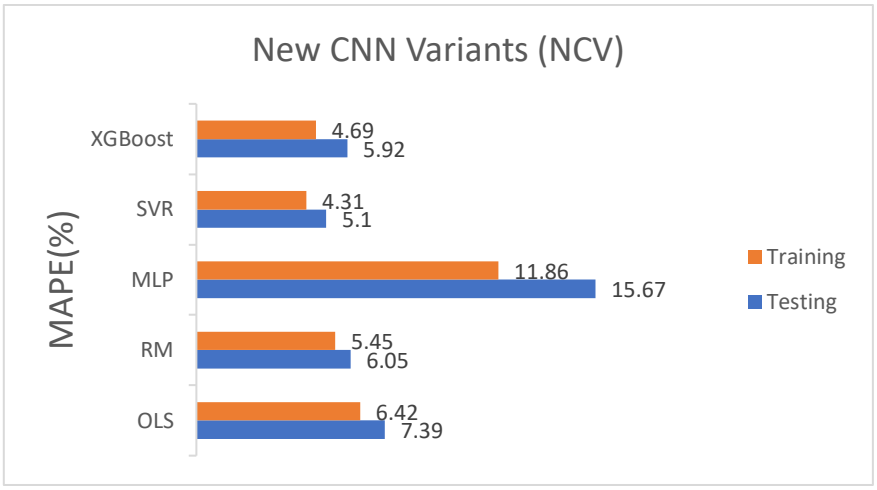
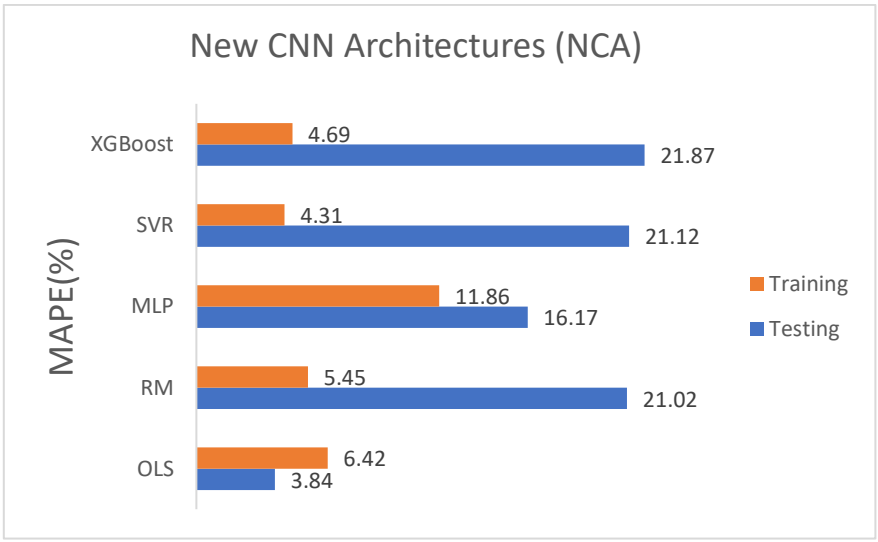


Figure 2: Prediction errors in predicting NCA



	Testing	Training
OLS	7.39	6.42
RM	6.05	5.45
MLP	15.67	11.86
SVR	5.1	4.31
XGBoost	5.92	4.69

Figure 3: MAPE during Testing vs. Training for NCV



	Testing	Training
OLS	3.84	6.42
RM	21.02	5.45
MLP	16.17	11.86
SVR	21.12	4.31
XGBoost	21.87	4.69

Figure 4: MAPE during Testing vs. Training for NCA