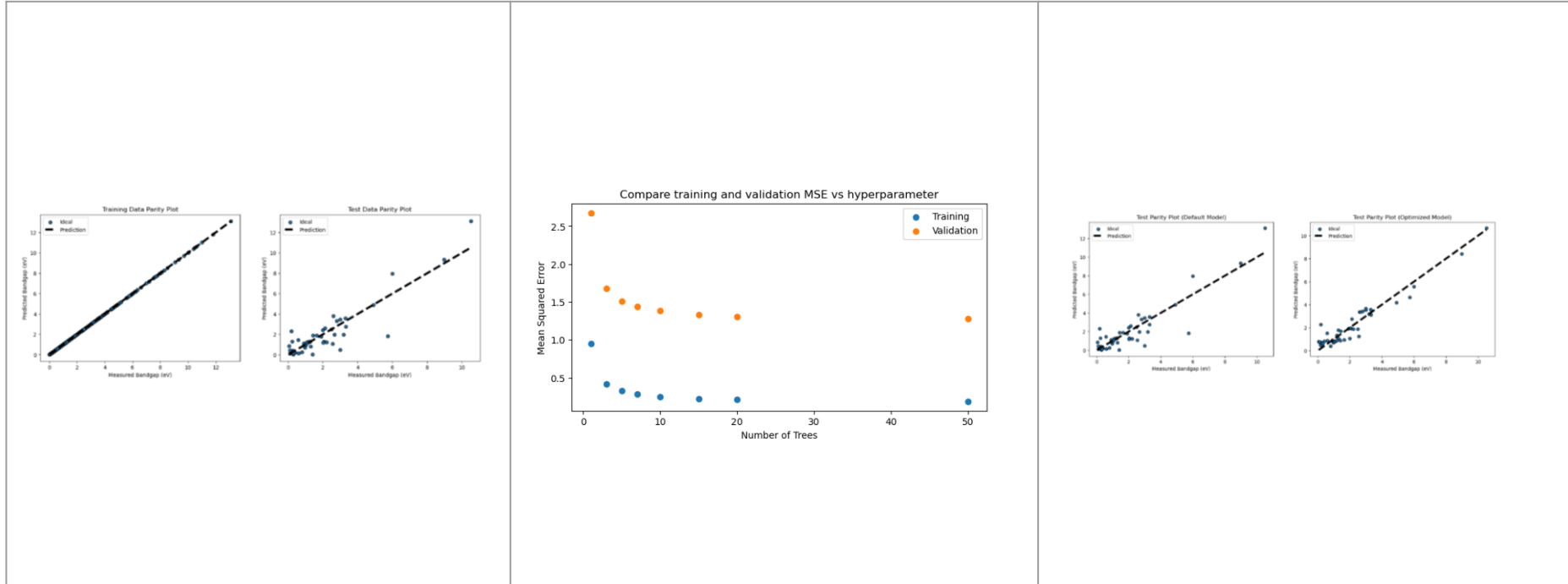


Assessment Figures

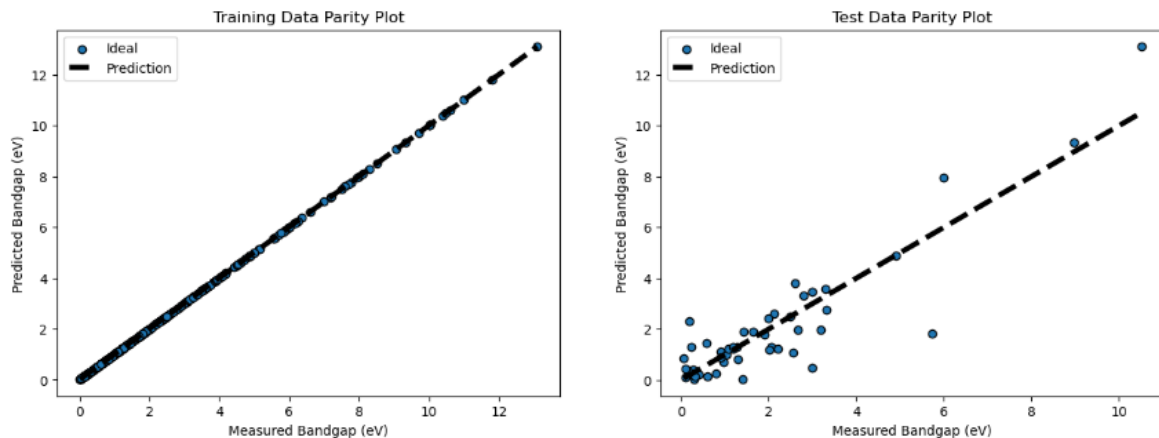


ML4ER Assignment 3

Jiahui Yang
Informatics Skunkworks
MSE 401, 3 Credits
Jul 24 2024

Progress

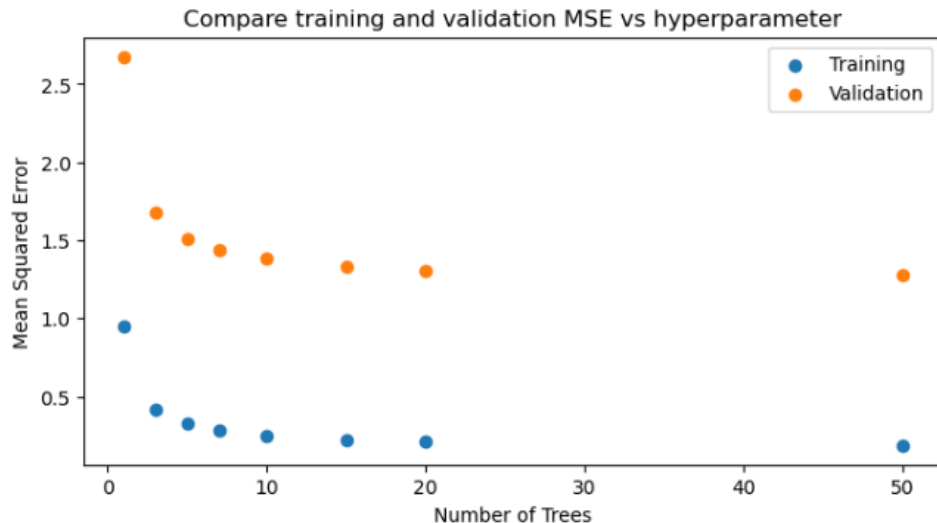
- Default model test data parity plot from above exercise 5.1



	Error Metric	Training Data	Test Data	Note
0	RMSE	0.0003 (eV)	1.0492 (eV)	(0.0 for perfect prediction)
1	RMSE/std	0.0001	0.4884	(0.0 for perfect prediction)
2	MAE	0.0 (eV)	0.6811 (eV)	(0.0 for perfect prediction)
3	R2	1.0	0.7614	(1.0 for perfect prediction)

Progress

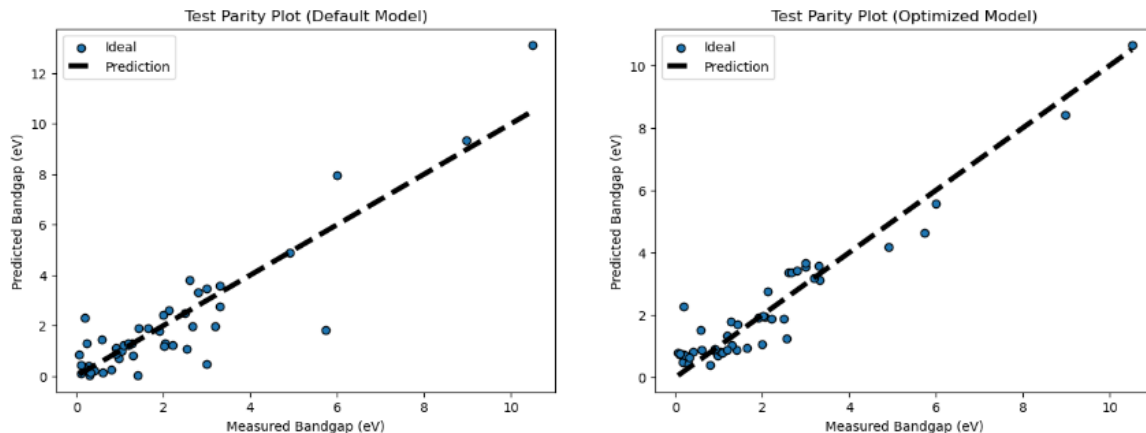
- Learning curve plot from above exercise 6.1



Minimum Mean Squared Error of test: 1.2795
Number of Trees at minimum of test: 50
Minimum Mean Squared Error of train: 0.1881
Number of Trees at minimum of train: 50

Progress

- Optimized model test data parity plot from exercise 6.4



6]:		Error Metric	Test Set (Default Model)	Test Set (Optimized Model)	Note
0	RMSE		1.0492 (eV)	0.6062 (eV)	(0.0 for perfect prediction)
1	RMSE/std		0.4884	0.2822	(0.0 for perfect prediction)
2	MAE		0.6811 (eV)	0.4776 (eV)	(0.0 for perfect prediction)
3	R2		0.7614	0.9204	(1.0 for perfect prediction)

Problems

- I have no problems with the sections I need to go through this week.

Questions

- Could you recommend any detailed textbooks on machine learning algorithms? I understand the working principles of most ML models but would like to delve deeper into the specifics.

Hours Summary

Date	Hours	Description of Work
07/24/2024	1.0 hours	Complete through section 7 of module 1