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FINUY4903A HW2

For this homework assignment, we have three different notebooks, your job is to write one sentence for each notebook describing:
(1) What you learned from the notebook example and the various prediction models used.
(2) And one method, technique, or trick you can use to attempt to improve the model.

Notebook	Learned	Improvement
Global Macro	The goal is to try to predict price rebounds in the NOK by looking at what is happening in the oil markets. To do this, an elastic net regression is useful, as it blends L1 and L2 regularization, which deletes and shrinks unnecessarily or correlated coefficients, and this results in its being helpful with datasets that have largely correlated variables (which is shown to be true by the matrix/graphs).	The initial strategy is suggesting to short as prices go up, which, at least in the short term, is trying to catch a falling knife (but in the opposite direction), so I would suggest potentially some additional indicators in conjunction with using the number of days in a trade as a parameter for exiting/taking profit.
Industry Factor	This notebook is taking the returns of 30 industries and attempts to project the performance of the chemical industry based on them. To do this, we use variations of LASSO regression, which is a normal linear regression with another term added to penalize less	While an alpha of 8% is great, I do think that there may be some avenues not taken into consideration that could potentially make the strategy better. Specifically, the data that is used could incorporate market data or sentiment, and different machine learning algorithms could

	important factors, making it better at weeding out irrelevant predictors in a large dataset.	be used, such as neural networks, which are good for handling high dimensions of data and discovering non-linear relationships.
Decision Tree	This notebook uses the monthly lagging returns of securities to predict future values with a decision tree, which is an algorithm that partitions data recursively until a certain stop condition is met (tree_to_code would be the decision tree in this case).	To determine unstable times, t-1, t-2, and price indicators might not be giving the full picture; using pricing data of a subset of the largest ETFs would give additional insight that might also influence the model.