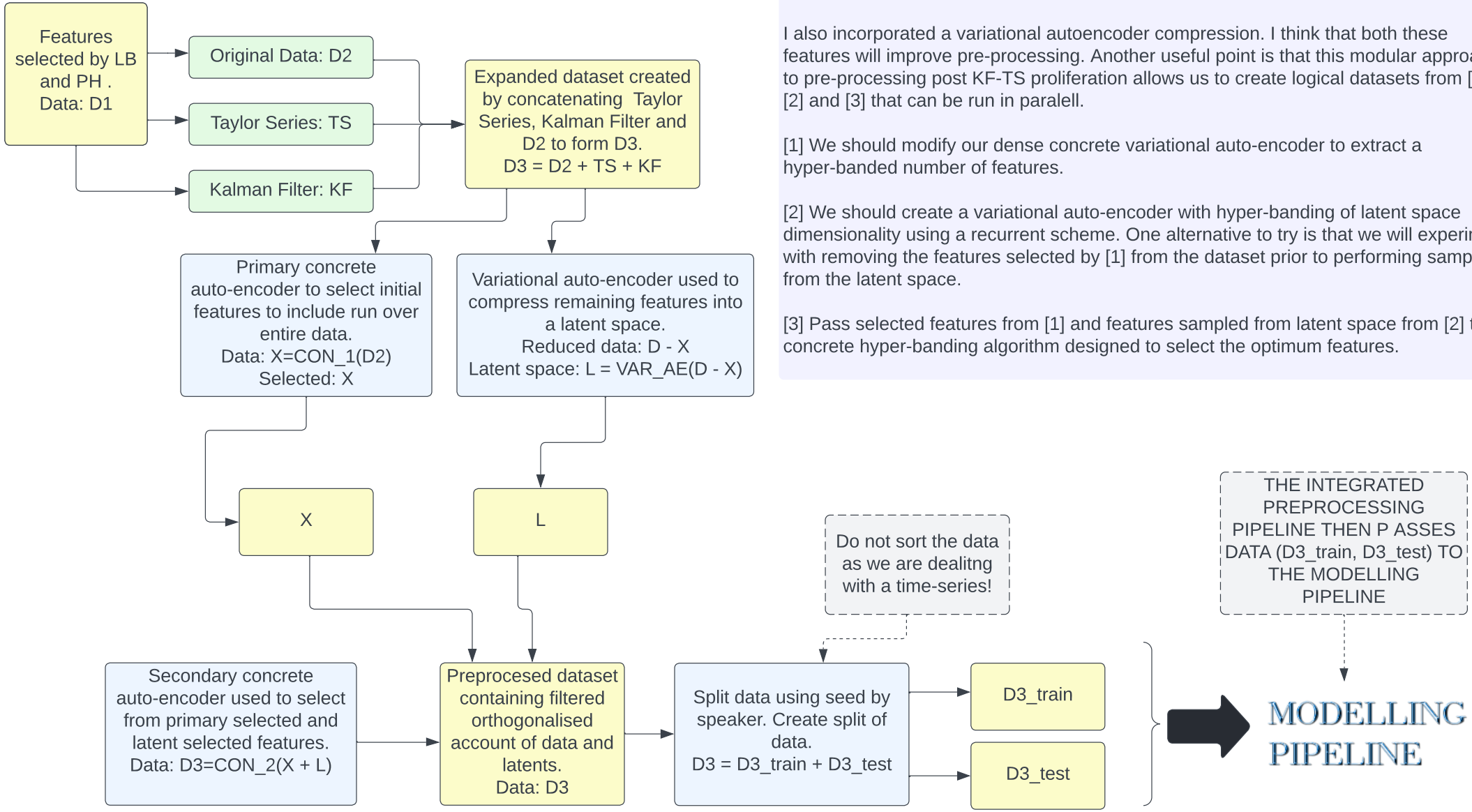
PREPROCESSING PIPELINE



The revised preprocessing pipeline functions through integrated concreete auto-encoder and variational auto-encoder.

I also incorporated a variational autoencoder compression. I think that both these features will improve pre-processing. Another useful point is that this modular approach to pre-processing post KF-TS proliferation allows us to create logical datasets from [1], [2] and [3] that can be run in paralell.

[1] We should modify our dense concrete variational auto-encoder to extract a hyper-banded number of features.

[2] We should create a variational auto-encoder with hyper-banding of latent space dimensionality using a recurrent scheme. One alternative to try is that we will experiment with removing the features selected by [1] from the dataset prior to performing sampling from the latent space.

[3] Pass selected features from [1] and features sampled from latent space from [2] to a concrete hyper-banding algorithm designed to select the optimum features.