**Week 09: R to Python**

\*Reference week 08 conversion doc as well, since many functions are similar and not repeated on here\*

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| **R** | **Python** | **Use** | **Difference** |
| postResample() | r2\_score()  \*sklearn metrics package | Retrieve the r-squared score of a model by passing data predictions and actual observations | Note, in both you must get predictions from model first  [Python](https://scikit-learn.org/stable/modules/generated/sklearn.metrics.r2_score.html)  [R](https://www.rdocumentation.org/packages/caret/versions/3.21/topics/postResample) |
| postResample() | mean\_squared\_error()  \*sklearn metrics package | Get the rmse of a model by passing data predictions and actual observations | Must get predictions from model first for both, in python we have to take the square root (np.sqrt) in order to get the rmse  [Python](https://scikit-learn.org/stable/modules/generated/sklearn.metrics.mean_squared_error.html)  [R](https://www.rdocumentation.org/packages/caret/versions/3.21/topics/postResample) |
| postResample() | mean\_absolute\_error()  \*sklearn metrics package | Retrieve the mean absolute error score of a model by passing data predictions and actual observations | Must get predictions for both beforehand from model  [Python](https://scikit-learn.org/stable/modules/generated/sklearn.metrics.mean_absolute_error.html)  [R](https://www.rdocumentation.org/packages/caret/versions/3.21/topics/postResample) |
| Not used | Pipeline() | Constructs a pipeline of column transformers and a model to then pass data to and get a final estimator. Can pass this to a hyperparameter search as well and get a final estimator. Can be used to do preprocessing on every fold. | Must name the estimators or preprocessing functions  [Python](https://scikit-learn.org/stable/modules/generated/sklearn.pipeline.Pipeline.html) |
| Not used | ColumnTransformer() | Applies column transformers (preprocessing) to columns of an array or pandas DataFrame | Must specify operations to be done on different column types, since numeric and category preprocessing can differ  [Python](https://scikit-learn.org/stable/modules/generated/sklearn.compose.ColumnTransformer.html) |
| Not used | make\_pipeline() | This is a shorthand for the pipeline constructor; it does not require, and does not permit, naming the estimators. | [Python](https://scikit-learn.org/stable/modules/generated/sklearn.pipeline.make_pipeline.html) |