

Forecasting Airline and Oil Company Prices using Statistical Mean Reversion CSC 265 Final Project

Dominick Harasimiuk - 30702462

May 7, 2021

Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

1	Introduction
1.1	Project Goal
1.2	Data
1.3	Terminology and Formulas
2	Pairwise Mean Reversion
2.1	Pairwise Correlations
2.2	Pairwise OLS
2.3	Residual OLS for Forecasting
2.4	Profit and Loss Analysis
3	Principal Component Basket Mean Reversion
3.1	Dimensionality Reduction
3.2	Basket OLS
3.3	Basket Lasso for Feature Selection
3.4	Profit and Loss Analysis
4	Discussion
5	Conclusion