

# A Unleveraged Portfolio

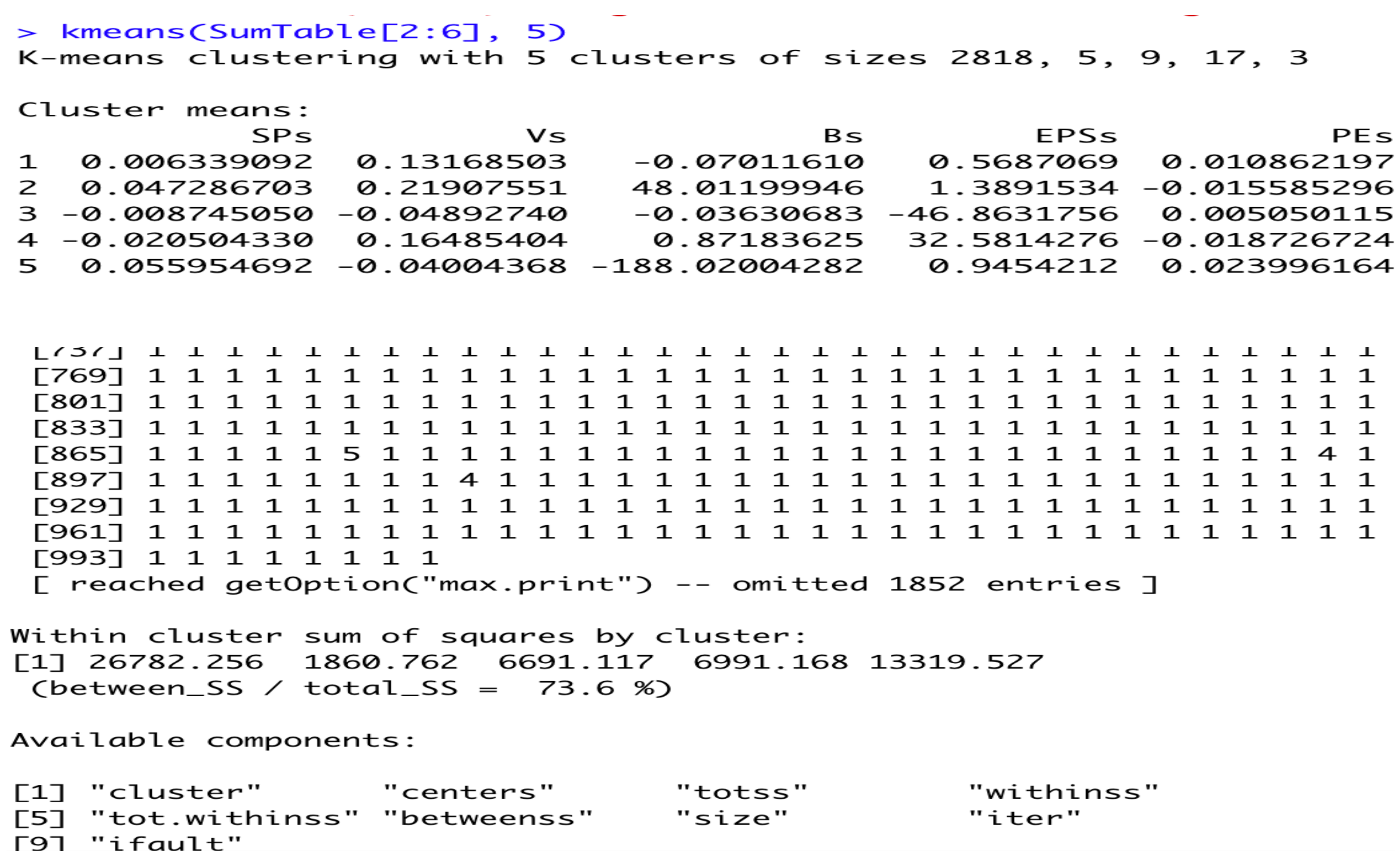
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Business Intelligence &amp; Analytics

People of different ages may tend to have different investment choices in the stock market. In general, older people are more likely to choose conservative stocks to invest in, while younger people prefer to invest in high-yield stocks. The risk and benefit are two important factors in stock investment. Young people in the 20-30 age range are becoming more conservative because of the limited amount of funds, and they focus on risks as well as benefits. For this practical problem, we will research the portfolio of stock in the project, which can provide some advice for those young people who want to maximize profits and minimize risks.

## Standardizing data.



### Newton method to find the optimal solution of weight combination

After deducting the risk-free return, the expected return of the portfolio is 5.7818%, the standard deviation is 2.45494% and the sharpe ratio is 2.315.