# Question 4.1

*Describe a situation or problem from your job, everyday life, current events, etc., for which a clustering model would be appropriate. List some (up to 5) predictors that you might use.*

# Here’s one answer.

An investor who wants to diversify a portfolio might want to cluster stocks, and then make sure the portfolio does not have too much money invested in any particular cluster.

A common way of clustering is to just classify each company by economic sector or size, but there might be deeper similarities that aren’t captured by those factors. So, the investor might create factors related to each stock’s performance (such as percent increase/decrease in price) in each quarter over the past 5 years, or each stock’s performance in certain key days or intervals, etc. Stocks that behaved similarly would be clustered together.