Introduction to Data Analysis

Campus Labs

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This is an introductory data analysis course. The primary goal of the course is to be able to answer elementary product data questions. We will be using [R](https://en.wikipedia.org/wiki/R_(programming_language)) and [SQL](https://en.wikipedia.org/wiki/SQL) to accomplish this goal.

The three primary focci of the course are:

* Data Visualization
* Data Structuring
* Data Collection

# Required Texts

We will be using the following texts for the course. All of the readings are provided.

1. Grolemund, G. & Wickham, H. (2016). [*R for Data Science*](http://r4ds.had.co.nz/). Retrieved from <http://r4ds.had.co.nz>
2. Wickham, H. (2016). *ggplot2: Elegant Graphics for Data Analysis*. New York: Springer. Retieved from <https://github.com/hadley/ggplot2-book>

# Learning Outcomes

1. Acquire product data and meta-data.
2. Import common data file formats into R.
3. Combine data from multiple sources.
4. Manipulate data into a tidy format.
5. Transform data with mutations and summarizations.
6. Select appropriate graph forms and aesthetics to represent data.
7. Produce tabular and graphical summaries of data.
8. Export tabular and graphical summaries of data from R.