

Pandas Skills to practice

- 1) Read documentation
- 2) Import a csv
- 3) Subsetting a DataFrame
- 4) Filter rows with `.loc` to meet some criterion
 - a. Filter to only get types A, B, and C
 - b. Filter to only get values between X and Y
 - c. Filter to get values where column A is greater than column B
 - d. Filter to remove rows where column A has missing values
- 5) Slice a series
- 6) Finding the dimensions/shape of a DataFrame and series
- 7) Identify unique values in a series
- 8) Count how many unique values exist in a series
- 9) Count up how many times each value appears in a series
- 10) Extract the values in a series without the index
- 11) Modify the index of a series / DataFrame
- 12) Modify the index of a series so it matches the index of another series
- 13) Create a new column of values by adding/subtracting the values of two other columns
- 14) Create a new column of values by combining the characters of other columns (for example creating a string for a date using the two columns: Month and Day)
- 15) Create a new column by extracting say the month from a date.
- 16) Create a column of date_time values
- 17) Fill in missing values in a column
 - a. Forward fill, back-fill
 - b. Fill using the mean value of the column
- 18) Calculate summary stats of DataFrame
 - a. means and sums of columns and rows
 - b. How many values are missing in a column or row
- 19) Group values in a DataFrame together and then calculate summary stats
 - a. Example: Find the mean weight for groups created by gender and age... men 20-29, men 30-39, ..., women 20-29, women 30-39, etc.
 - b. Find the difference between these newly created columns: what is the difference between the avg weight of men and women in the 20-29 group, the difference between the avg weight of men and women in the 30-39 group, etc.
 - c. Perhaps you need to look up how to create groups based on age - maybe the function `cut()`
- 20) Create and manipulate a multi-index
- 21) Reshape a 'long' dataset to be 'wide'
- 22) Probably more...