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#### **Instructions**

- Accomplish the document completely
- Save the document as a .pdf file with the following name format: <IDNumber>\_<RequirementTitle>\_COA (e.g. 12345\_Assignment1\_COA)
- Attach this document to each course requirement submission unless otherwise specified by the Course Instructor

#### Certification

I hereby certify that the submission described in this document abides by the principles stipulated in the student handbook.

I further certify that I am the author of this submission and that any assistance I received in its preparation is fully acknowledged and disclosed in the documentation.

I have also cited all sources from which I obtained data, ideas, or words that are directly copied or paraphrased in this document. Sources are properly credited according to accepted standards for professional publication.

I am aware that any potential case of plagiarism or cheating (similar code) regarding my submission merits a 0 for the requirement and a disciplinary case filed to the Discipline Committee of the Loyola Schools.

#### Sources

Choosing color palettes — seaborn 0.11.2 documentation. (n.d.). Seaborn. Retrieved July 19, 2022, from https://seaborn.pydata.org/tutorial/color\_palettes.html [FIXED] Plot multiple columns of pandas DataFrame using Seaborn. (2021, December 12). PythonFixing. Retrieved July 19, 2022, from https://www.pythonfixing.com/2021/12/fixed-plot-multiple-columns-of-pand as.html

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- How to Change the Position of a Legend in Seaborn. (2021, April 7). Statology. Retrieved July 19, 2022, from
  - https://www.statology.org/seaborn-legend-position/
- How to convert a Pandas DataFrame column from object to int in Python. (n.d.). Adam Smith. Retrieved July 19, 2022, from https://www.adamsmith.haus/python/answers/how-to-convert-a-pandas-dat aframe-column-from-object-to-int-in-python
- How to Create a Pie Chart in Seaborn Statology. (2021, July 20). Statology. Retrieved July 19, 2022, from https://www.statology.org/seaborn-pie-chart/
- How to sum in a Pandas pivot table? (n.d.). EasyTweaks.com. Retrieved July 19, 2022, from https://www.easytweaks.com/pandas-pivot-table-sum/
- How to use Seaborn for Data Visualization | Engineering Education (EngEd) Program. (2021, January 29). Section.io. Retrieved July 19, 2022, from https://www.section.io/engineering-education/seaborn-tutorial/
- matplotlib Rotate label text in seaborn factorplot. (n.d.). Stack Overflow. Retrieved July 19, 2022, from https://stackoverflow.com/questions/26540035/rotate-label-text-in-seaborn-factorplot
- *numpy.vectorize NumPy v1.23 Manual*. (n.d.). NumPy. Retrieved July 19, 2022, from https://numpy.org/doc/stable/reference/generated/numpy.vectorize.html
- Pandas combine column values into a list in a new column. (2017, May 10). Stack Overflow. Retrieved July 19, 2022, from https://stackoverflow.com/questions/43898035/pandas-combine-column-val ues-into-a-list-in-a-new-column
- Pandas Create New DataFrame By Selecting Specific Columns. (n.d.). Spark by {Examples}. Retrieved July 19, 2022, from https://sparkbyexamples.com/pandas/pandas-create-new-dataframe-by-sele cting-specific-columns/
- pandas.DataFrame.sort\_values pandas 1.4.3 documentation. (n.d.). Pandas. Retrieved July 19, 2022, from

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https://pandas.pydata.org/docs/reference/api/pandas.DataFrame.sort\_value s.html

- pandas extract month from date in python. (2014, September 29). Stack Overflow.

  Retrieved July 19, 2022, from

  https://stackoverflow.com/guestions/26105804/extract month from date in
  - https://stackoverflow.com/questions/26105804/extract-month-from-date-in-python
- pandas.pivot\_table pandas 1.4.3 documentation. (n.d.). Pandas. Retrieved July 19, 2022, from
  - https://pandas.pydata.org/docs/reference/api/pandas.pivot\_table.html
- Pandas Series: explode() function. (2022, May 28). w3resource. Retrieved July 19, 2022, from https://www.w3resource.com/pandas/series/series-explode.php
- Pandas Split Column by Delimiter. (n.d.). Data Science Parichay. Retrieved July 19, 2022, from
- https://datascienceparichay.com/article/pandas-split-column-by-delimiter/pandas.to\_datetime pandas 1.4.3 documentation. (n.d.). Pandas. Retrieved July 19, 2022, from
- https://pandas.pydata.org/docs/reference/api/pandas.to\_datetime.html
- python Pandas dropna() function not working. (2018, April 7). Stack Overflow.
  - Retrieved July 19, 2022, from
  - https://stackoverflow.com/questions/49712002/pandas-dropna-function-notworking
- python pandas, melt, unmelt preserve index. (2018, May 25). Stack Overflow. Retrieved July 19, 2022, from
  - https://stackoverflow.com/questions/50529022/pandas-melt-unmelt-preserve-index
- *Python String split() Method.* (n.d.). W3Schools. Retrieved July 19, 2022, from https://www.w3schools.com/python/ref string split.asp
- *python Turn Pandas Multi-Index into column.* (2013, November 21). Stack Overflow. Retrieved July 19, 2022, from

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- https://stackoverflow.com/questions/20110170/turn-pandas-multi-index-into-column
- Set value to an entire column of a pandas dataframe. (2017, June 23). Stack Overflow. Retrieved July 19, 2022, from https://stackoverflow.com/questions/44723183/set-value-to-an-entire-column-of-a-pandas-dataframe
- Split a Pandas column of lists into multiple columns. (n.d.). Stack Overflow. Retrieved July 19, 2022, from https://stackoverflow.com/questions/35491274/split-a-pandas-column-of-list s-into-multiple-columns
- Steps to Sum each Column and Row in Pandas DataFrame. (2021, September 10). Data to Fish. Retrieved July 19, 2022, from https://datatofish.com/sum-columns-rows-dataframe/
- Vandeput, N. (2021, August 23). *Do You Use Apply in Pandas? There is a 600x Faster Way*. Towards Data Science. Retrieved July 19, 2022, from https://towardsdatascience.com/do-you-use-apply-in-pandas-there-is-a-600x-faster-way-d2497facfa66
- Wooten, P. (2022, March 29). *How To Remove Unwanted Parts From Strings in Pandas*. Towards Data Science. Retrieved July 19, 2022, from https://towardsdatascience.com/pandas-remove-unwanted-parts-from-string s-92ac881e60a2

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