

Research Assignment 1

Unsupervised Learning and Clustering

The intent of this assignment is for you to research the topics listed below. It is your responsibility to find scholarly papers or articles so you can author an informative paper about the topics. Any citation style [found here](#) is acceptable.

Please note that when finding papers or articles, look for ones by professionals in the field that do a respectable job of explaining the topics. [Medium](#) is a useful source or you may find other content in [Google Scholar](#). Wikipedia is not an acceptable source for this course.

At a minimum, your paper should cover:

Unsupervised Learning

What is unsupervised learning and how is it different from supervised learning? Give an example of unsupervised learning.

Clustering

What is clustering and how is it helpful in data science? Explain the difference between k-means and hierarchal clustering and why you might want to use one over the other.

Data Standardization

What is data standardization? How is it different from normalization? Describe how standardization can benefit clustering.

Expectations

- 1) Do NOT include the questions above in your paper.
- 2) Answer the questions as detailed as possible but be clear and concise.
- 3) Complete at least one page (>500 words) as a Microsoft Word document (.docx).
- 4) Give credit to your sources of information.
- 5) Check grammar and spelling (F7) in Word before submitting.

Research more than one source of information so you gain a broader understanding of the topics. This will also help you provide meaningful content in your paper. Be sure to give credit to all your sources of information. Copying and pasting from articles will result in a zero and additional penalties. Limit quoted information to no more than two sentences in your paper. Be sure to [properly identify and cite](#) quotes.

Note: All papers checked for plagiarism. The paper should be your words and interpretations.