CLUSTERING ANALYSIS

Please analyze the mall customer dataset attached below and answer the following questions. This is an individual assignment aimed to apply clustering on customer segmentation and design buyer persona.

- Using fviz_cluster command to cluster these customers to 2 group based on their demographic and purchasing habits. You can pick what variables to use in clustering. Please explain why you picked these variables and what they stand for.
- Choose two variables and visualize the clustering.
- Describe a buyer persona for each cluster (examples and template are provided in the lab session slides)
- How about 3, 4 or 5 clusters? Visualize the difference.
- What is the optimal number of clusters?

Your answer should include the clustering outputs and the design of two buyer personas. You can submit your answer either in word or pdf file on canvas. **Please keep your submission within 2 pages (1.5 spacing, 12-point Times New Roman font, standard 2.5 margins on all pages).** TA and instructors won't read beyond. You can include supporting figures and/or tables referenced in APA 7th in the body of your report. If you'd like to provide additional supporting graphs or data, please use Appendices. The page limit does not apply to appendices.

Suggested format is as follows.

- Answers to the five questions
- Summary
- Reference & Appendix (optional)