

Windows or Mac?

Countless consumers have pondered this question when preparing to buy a new computer. As a result, Apple (AAPL) and Microsoft (MSFT) have been rigorously researching several aspects of consumer buying behavior in regards to the decision making behind this question. Both firms have commissioned research and analysis teams to study aspects such as system architecture, security, and overall performance.

Recently, Apple has decided to approach this question from the perspective of the Big Five personality traits as well as the Hult DNA. **As such, your team has been commissioned to run an analysis on these factors.** Apple is looking forward to receiving your key insights, as well as an organized Jupyter Notebook that can be shared with their internal analytical teams. They also have sent you a kind reminder to utilize external research to support your findings and to give details related to details such as audience size.

Data

Survey data has been provided via the assignment link. Assume this data, including its demographics, are representative of the population Apple is attempting to study.

Deliverables

1. Analysis Summary

Save this as a .pdf file under the following naming convention: Team_NUMBER_A3_Write_Up.pdf

- Present your best **THREE insights (maximum 100 words per insight)**
- Make **one actionable recommendation** based on your analysis and offer recommendations for business implementation (**maximum 200 words**)

2. Data Analysis and Code

Save this as a Jupyter Notebook (.ipynb) file under the following naming convention: Team_NUMBER_A3_Analysis.ipynb

Your code should include the following:

- proper separation of data based on its purpose and characteristics (demographics, psychometrics, etc.)
- utilizing appropriate unsupervised learning techniques

Code should:

- be well commented and abundantly utilize markdown
- avoid “data dumping” (i.e. avoid any unnecessary output)

- run without errors
- explain your steps as well as your thought process (the *why* behind what you are doing)

Permitted:

- Jupyter Notebook, vsCode, or spyder from the Anaconda environment (Anaconda versions only)
- Guided scripts for Sessions 8, 9, and 10 (must be downloaded from the final exam link, prefilled guided scripts are NOT permitted)
- LIMITED use of Excel
 - May be used for analysis of principal components, clusters, and observation-level factor loadings/cluster memberships (highlighting, etc.)
 - May NOT be used for data cleaning (dropping columns, etc.)
- One note sheet **per team** (A4 paper size). This can be hand-written or printed and you may use both sides of the paper for your notes
- help() documentation
- Internet (search engines, StackOverflow, external research sites, etc.)
- GitHub, Microsoft Teams, and/or Email to share your work amongst your teammates. *Note:* if you are using GitHub, make sure your team's repository for this assignment is set to private.

Not Permitted:

- Any other computational/analysis tools or IDEs
- Communication with other teams in any form
- Notes or textbooks (other than your team's single-page A4 note sheet)
- Mobile phones