Apple DataViz Team | Design Challenge

Problem Statement

Analyze user study data to help us understand how we should update our watch band sizing recommendations for a new 'elastic watch band'.

The current proposed sizing scheme is shown below: each band size accommodates a 10mm wrist circumference range and there are 9 sizes total.

Wrist Circumference (mm)	120 - 129	130 - 139	...	...	191 - 200	201 - 210
Proposed Band Size	Size 1	Size 2	...	...	Size 8	Size 9

Data

ParticipantData.csv Data on user study participants, including: Gender, Ethnicity, Age, Wrist Circumference(mm).

Subject Number	Gender	Ethnicity	Age	Wrist Circumference (mm)	Proposed Band Size
...	...	...	...	...	Calculated from 'Band Sizing' table above

FinalSelection.csv Some participants were then asked to select a watch band based on which one they felt fit them the best. This file contains that information.

Subject Number	Selected Band Size
...	...

Deliverables

1. Write code in R or Python to analyze the data in the **ParticipantData.csv** file. Generate some plots summarizing this data. Are there any interesting trends / patterns?

2. Use the data in **FinalSelection.csv** in combination with **ParticipantData.csv** to create a statistical model that will do a better job of deciding which watch band size a user should be matched up with. Generate some visuals to show how much better your model's results are, compared to the current recommendation.

Please share your code, and any results in your preferred format (notebook / markdown / presentation + source code etc.). Please make sure to summarize your thought process, and any key-findings you discovered. It doesn't have to be very polished, given the time constraints. Please feel free to note down any next steps you would have taken, if you had more time.

Challenge Constraints

1. 4 hour time limit (can be spaced out throughout the day, but limit to 4 hours in total).
2. You are free to use the internet / reference books, etc. However, if you use anything you found online, please add a comment pointing to your source.