

- Current algorithm
  - A passenger buys a ticket. There is a 70%/30% chance they'll buy economy plus vs economy
    - If a passenger buys economy plus, they choose their seat immediately.
    - If a passenger buys economy, they buy a "block" (number) of seats that don't have seat assignments yet, but the number of seats available decreases accordingly.
  - When no seats are remaining, economy is randomly seated one at a time

TASK: Design an algorithm that would seat people more equitably. Write up a description of your algorithm and save it as week\_03\_seating/seating.pdf. Make sure this description states how it should improve equity and also how it might affect other concerns.

- NO CODE NEEDED HERE just a description but make a note of implementation issues that might make your algorithm more practical or more difficult to implement

- New algorithm ideas
  - **Ideally**, economy\_blocks that include any child under the age of 5 (0-4) will still be seated randomly, but each child is seated next to a family member.
    - Any family member 5+ will be "independent": ind-#
    - Any family member 0-4 will be "dependent": dep-#
    - Independents >= dependents
      - Each dependent is paired with an independent and then assigned randomly where there are two available seats
      - Any extra independents are unassigned until end
    - Independents < dependents
      - The family gets all gets economy\_plus tickets
    - Implementation considerations:
      - Must include data that represents passengers' ages
      - What if there are no pairs of empty seats available? Split them up? Don't assign?
  - **As a simpler alternative**, any family that includes at least one child under the age of 5 (0-4) will all get economy\_plus tickets and are thus able to choose their seats
    - Implementation considerations:
      - Must include data that represents passengers' ages