

Airplane Seating Algorithm

- Create airplane seating grid.
- Allow Economy Plus travelers to select their seats at time of ticket purchase.
- Randomly select remaining seats in blocks for families with children under a given age (16, say).
- Randomly select remaining seats for individuals with conditions such as physical disabilities or individuals with service animals.
- Randomly select the remaining seats for individuals with no special conditions.

Benefits:

Allows the airlines to make money by allowing an unlimited number of seats to be selected by economy plus passengers (these may include families and other individuals who may be willing to pay more) while reducing customer concerns about being forced to split their families or pay a higher fare. Travelers now have the option of selecting their seats as individuals or family blocks; or pay less and allow the algorithm to randomly select their seats as individuals or family blocks.

Challenge:

Coding this simulation will be more challenging:

- More conditions to consider such as: At what point do you cut selling “economy plus” tickets?
- What happens if a block is not large enough to a family of a given size even though the number of requested seats are still available?