

Airplane simulation algorithm

The principal issue with the original algorithm was that the plane did not allow families to sit with one another if they were purchasing through economy while economy plus passengers get to choose their seats. Economy plus passengers must pay more than economy passengers.

A different algorithm that could work is to get rid of the economy plus and continue the seating as a randomized system. This way, there is no difference between the passengers and all passengers can sit without being split up. A challenge with this system is that not all passengers would like to be seated in their designated seats and would prefer to have a different one.

Another different algorithm would be to give a seating together option for selection in economy. This way, families that would like to sit together can do so. A challenge with this option would be that families would take up all of the seating options. It might leave some single passengers with less desirable seats.

One totally different algorithm would be to have designated airlines for families and some for single passengers. This could solve the issue of having economy families being separated if they pay less because instead, they would still be together on a flight that allowed only family passengers. Both the single and family issued airlines could have a system where if they would like the option to sit in a preferred seat, they could if they paid more money, similar to the economy plus model.