

DATA 609 - Final Project Proposal

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Mission Statement

Airlines have made headlines in recent months due to issues with ‘bumping’ passengers from their flights. In this project, I plan to run a Monte Carlo simulation to predict the optimal number of passengers booked for a given flight.

Motivation

Upon reviewing the topics covered thus far during the semester, I felt that Monte Carlo simulations was the one I felt the least comfortable with. To better understand this important technique, I decided to focus on this area.

The subject for this project was inspired by Chapter 5.5, project 3 of the textbook, (as well as helpful guidance from the professor).

Data

I will attempt to source most of the data, such as ticket costs, destinations, etc, from actual airlines. I haven’t yet been able to find much during my preliminary research, however. In the event that I’m unable to procure any factual numbers, I will make up my own, trying to be as accurate as possible in line with the project’s defined assumptions.

Tools

This project will likely be done in R, although I may decide to do it in Python if I find the time to gain a sufficient foothold in the language.