USCViterbi

ISE 533: Integrative Analytics
Spring,2023

Homework 1 (Due Jan 23, 2023)

This HW is being changed to groups of TWO so that we can start building smaller groups of two, which will then help form groups of four later on. In order to help formation of groups, this HW will be due on Jan 23, NOT Jan 19 as announced in the syllabus. This allows some time to find a partner for the groups. But do not wait to read the paper which is posted (by Jeff Camm) on building Optimization and Deploying models.

What is expected in this homework is for the team to setup two datasets: Population data for 2011, and 2020 for all counties in Ohio (see the paper posted on Blackboard).

1. Using the 2011 data, solve the network location problem which is described in the paper by Jeff Camm.
2. Using the 2020 data, repeat the same exercise as above.
3. Verify whether the solution from 2011 satisfies the "glide-path" property described in the paper.
4. Assuming that you knew the 2020 data in 2011, setup a mathematical model (no need to solve it) to ensure the glide-path property would be satisfied for the 2011 solution (in 2020).