AYENNA TRAEVER

Ayenna is the broadcasting producer of the 4-yearly Westeros Football Cup (9 teams, 9 matches, 18 days). Her **goal is** to maximize the ad revenue (porportional to the population of the match city) and minimize the accomodation cost of the crew of 12.

Regression task: There is a new up-and-coming city in Westeros! (This is the hold-out dataset.) Ayenna has all the info about this city's airbnbs except the price. Should Ayenna organize the Westeros Cup here? (Let's say she can calculate the revenue from tickets and ads based on the population. Ayenna now only has to do 2 things. Look at whether this new place has everything they need (arenas, stadiums, etc.) and calculate whether it maximizes their possible profit or not. (Possible revenue – possible cost of accommodation (so she needs to find a place that ticks every box))).

Question 1: Which cities have the highest population, ensuring a large local viewership for maximum ad revenues? (*Explanation*: Ayenna would want to broadcast from a city with a large audience to maximize ad revenue.)

Question 2: What are the average prices of Airbnb listings in the top 5 most populated cities? (*Explanation*: She needs to budget for accommodation for the crew in these cities.)

Question 3: Which cities have the most affordable accommodations that still offer amenities (proximity to the stadium, free Wi-Fi, and large spaces for equipment)? (*Explanation*: Balancing accommodation costs with the necessary amenities for the crew is important.)

Question 4: Which cities have the highest number of large corporations or businesses headquartered (potential sponsors) within a Explanationable distance from the main stadium? (*Explanation*: Proximity to potential sponsors can facilitate better sponsorship deals and additional revenue.)

Question 5: Which cities have the highest average income levels, indicating greater potential for ticket sales and premium ad revenue? (*Explanation*: Cities with higher average income levels might have residents more willing to spend on tickets and advertisers targeting these demographics.)

Question 6: Which cities have the highest number of large stadiums/arenas (with capacities over a certain threshold) suitable for holding simultaneous football matches? (*Explanation*: Ayenna needs to identify cities with multiple large venues to accommodate the scale of the event.)

WDYT: If you are trying to forecast how many people are going to need Airbnbs, how could you account for big festivals such as the Westeros Football Cup? How would you make sure that your model performs well on regular days? How would you estimate the effect of such events?