

Project 03 Handout

Objective

Work with a simplified example from your Project 3 data to identify:

- The spatial unit of analysis
 - The type of spatial join required
 - Potential problems with the join
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Instructions

1. **Get into pairs** (or groups of 3).
2. **Review the mini datasets** shown below.
3. As a group, answer the following questions:

Group Worksheet Questions

1. What is your outcome variable (y)?
2. What is your explanatory variable (x)?
3. What is the spatial unit of analysis in each dataset?
4. What type of spatial data is this? (point, polygon, raster)
5. What kind of spatial join is needed? (e.g., point-to-polygon, polygon-to-polygon)
6. What could go wrong with this join?

Example Mini Datasets

Shopper Sample

shopper_id	store_id	tr_set_id	gtin	price	quantity	purchase_date	zip
a1	101	10001	0001	2.99	1	2023-07-01	80021
b2	102	10002	0002	1.50	2	2023-07-01	80022
c3	103	10003	0003	3.25	1	2023-07-01	80023

Store Sample

store_id	store_name	zip_code	latitude	longitude
101	Store A	80021	39.9205	-105.092
102	Store B	80022	39.9206	-105.093
103	Store C	80023	39.9207	-105.094

Census Sample

zip_code	population	median_income	percent_college_degree
80021	25,000	68,000	0.45
80022	18,000	59,000	0.32
80023	22,000	63,000	0.38

Weather Sample

zip_code	date	avg_temp	precip
80021	2023-07-01	85.2	0.10
80022	2023-07-01	87.1	0.00
80023	2023-07-01	86.4	0.05