

Selling Snowboards in Sapporo, Japan

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METIS (DS/ML)

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Physical marketing is omnipresent in Japan



Billboards ▪ Posters



Tissue Packs



Flyers

Physical marketing is omnipresent in Japan, but **inefficient**

$$\begin{aligned}\text{反響率} &= \frac{30}{10,000} \times 100 (\%) \\ &= 0.3\end{aligned}$$

Low Response Rates



Stiff Competition



Wasteful



The Client

- Snowboard retailer in Sapporo, Hokkaido
- Wants to increase revenue
- Limited marketing budget

Impact Hypothesis

Focusing flyer distribution within neighborhoods where higher percentages of {target audience} live will result in yen earned per yen spent on ads.

Let Data Science Help!

1. Collect customer demographic data

- A. Currently registered rewards members
- B. Survey people who give contact info (questionnaires)

2. Determine {target audience} for ad campaign using data science

- A. What kinds of customers make frequent and/or expensive purchases?
(regression)
- B. Do my customers consist of unique groups with predictable shopping behaviors?
(clustering)

Young adults
aged 20-29

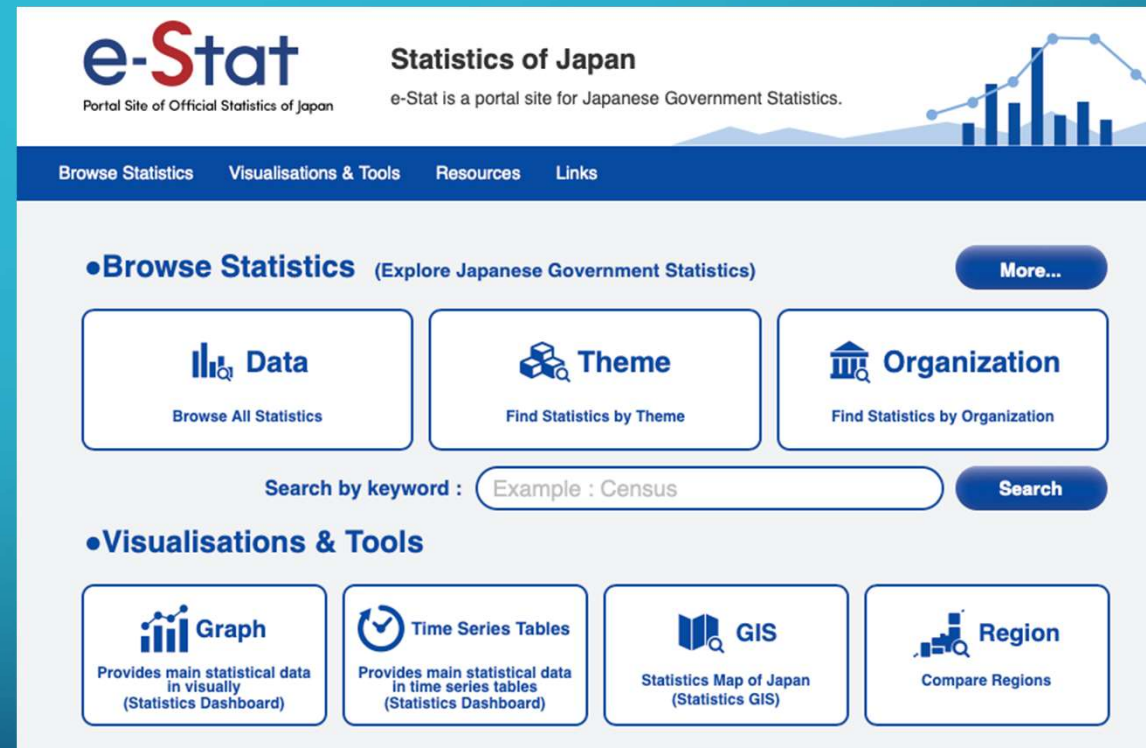
Parents with
children aged < 7

IT labor force
(情報通信業)

Let Data Science Help!

3. Identify districts with greatest membership in target audience

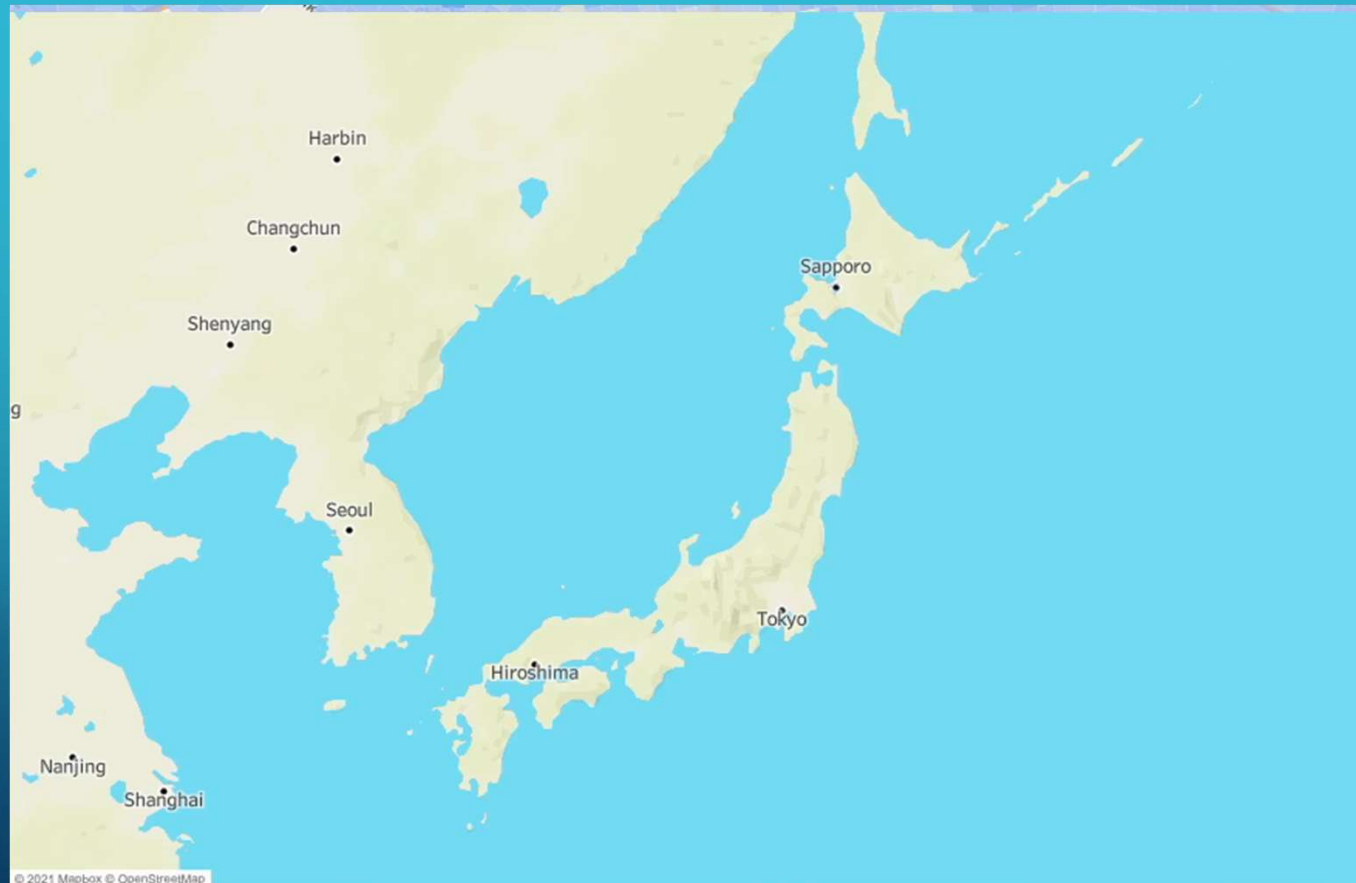
- Data source: Census of Japan (国勢調査)
 - Portal Site of Official Statistics of Japan (National Statistics Center, Statistics Bureau, Ministry of Internal Affairs: [eSTAT.go.jp](https://estat.go.jp))
- Statistics available:
 - Population (residents, households)
 - Age (5-year bins)
 - Household type
 - Occupation/industry (agriculture, management, clerical, etc.)
 - Family income, education, migration...



Let Data Science Help!

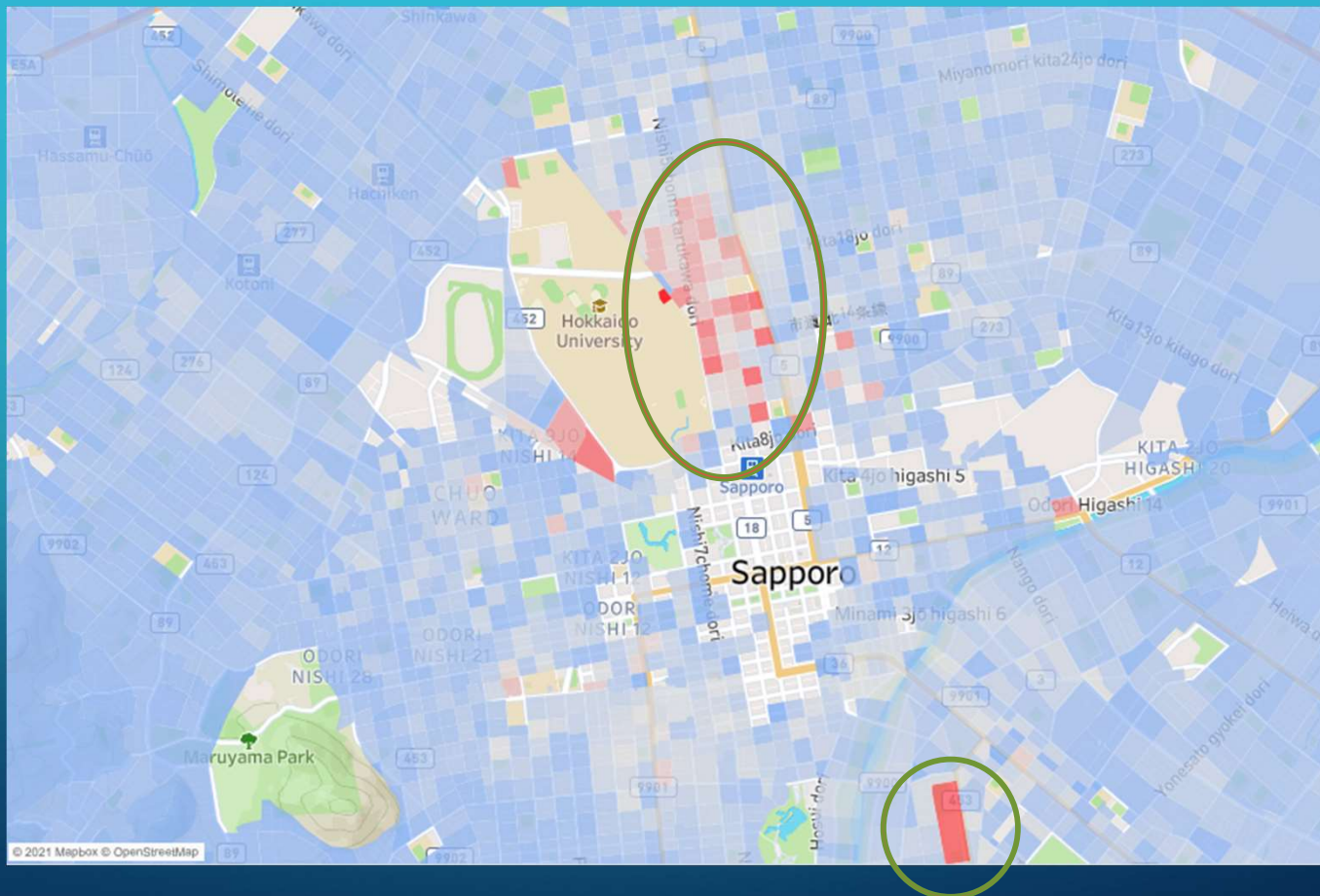
4. Distribute flyers to mailboxes in target neighborhoods
 - A. "5% off your purchase if you mention the flyer"
 - B. Encourage visitors to become members for better profiling
5. Determine success in terms of ROAS (return on ad spending) per
 - A. Fiscal quarter (ex. Q4 2021 v. Q4 2019)
 - B. Season (ex. Nov-Apr 2021 v. Nov-Apr 2019)
6. Iterate

Ex. 1 % Residents aged 20-29



Red threshold: 33%

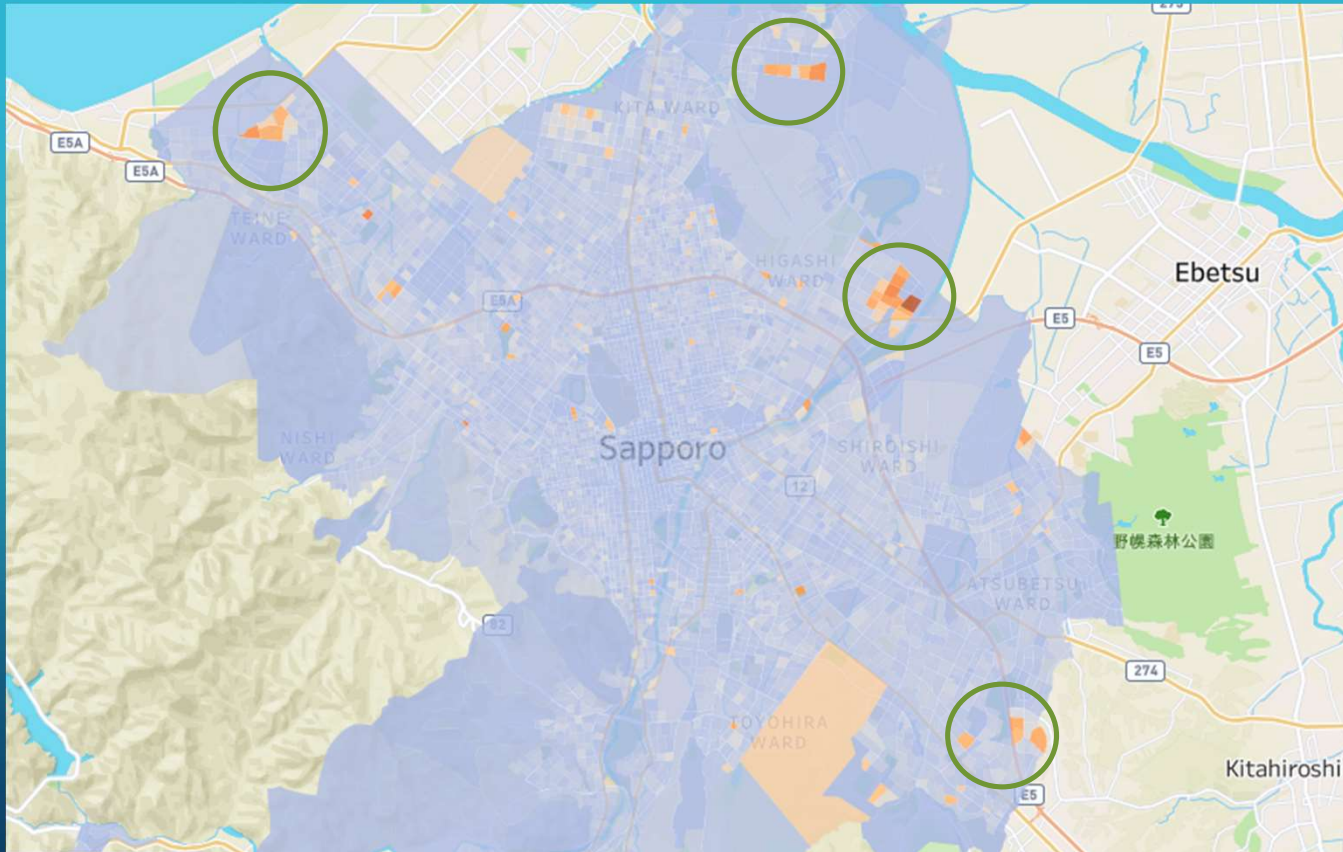
Ex. 1 % Residents aged 20-29



Red threshold: 33%

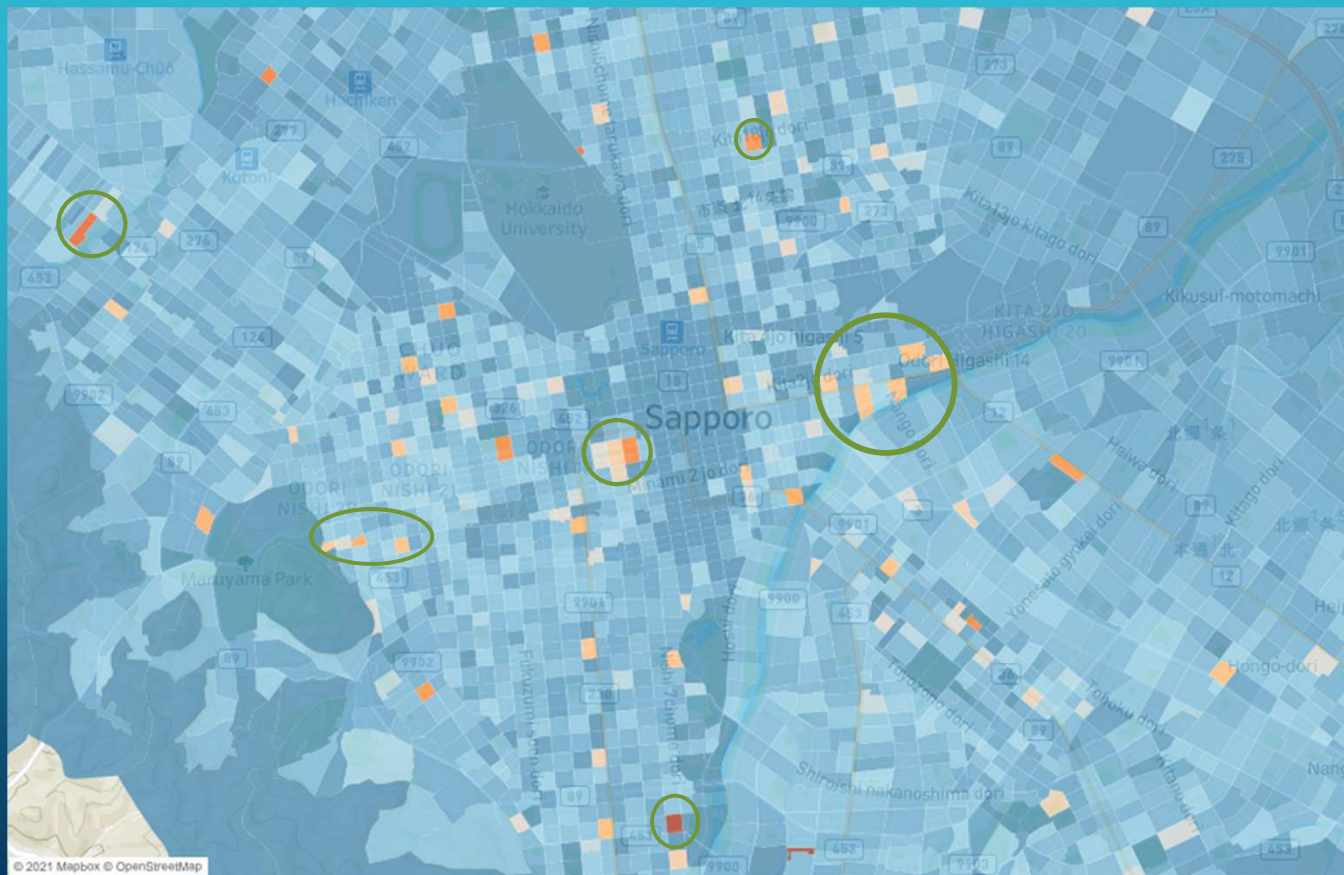
flyers needed to cover
top 20 districts: ~3,200

% Households with children aged 0-6



flyers needed to cover
top 20 districts: ~2,000

Ex. 3 % Workers in IT sector



Red threshold: 15%

flyers needed to cover
top 20 districts: ~1,000

Food for Thought

Explore Maps on Tableau



#visithokkaido

Food for Thought

Generalizable approach to physical marketing



Appendix

Geographic Segmentation

Profiling groups of people living* in similar regions to effectively increase revenue or service usage by customizing them to improve product-market fit and customer awareness

Users	Objectives	Useful data (open-source)
Private sector	<ul style="list-style-type: none">• Establish local presence• Predict cost-benefit and revenue• Avoid market oversaturation	<ul style="list-style-type: none">• Demographic data (population, household size, income, age distribution, etc.)• Location data for competing or complementary businesses
Public sector	<ul style="list-style-type: none">• Determine unmet needs• Define scope for NPO bids	<ul style="list-style-type: none">• Location data for public facilities (parks, schools, childcare centers, etc.)

*working, shopping, browsing, etc.

Think Global ▪ Act Local

Geographic Segmentation



Think Global ▪ Act Local



Source: DigiPot.net (www.digipot.net/?p=63032)

Solution paths (traditional)

- Distribute flyers near store, in mailboxes or by hand
 - Audience already in vicinity of store, but...
 - Physical proximity \neq buying likelihood for expensive goods
 - Distant buyers overlooked
- Advertise online using Facebook or Google Adsense
 - Expansive reach and affordable price, but...
 - Black box difficult to trust/interrogate
 - Targeting specific audiences = ¥ ¥ ¥