My Geospatial Story

Geospatial Analysis on Seasonal Tourism Spots in Japan”! 🌸 🎆 🏔️ ⛱️ ❄️

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日本の四季折々の観光地の地理空間分析』！

Software Used

1 Overpass API

2

3 QGIS

For Data Preparation

Notepad++

Let's Explore Japan:
Land of Wonders and Dreams!

The Land of the Rising Sun, Japan offers a unique blend of ancient tra sine.

Mount Fuji is an active volcano

Translation from Japanese to English

```
ALTER TABLE airportpoly ADD COLUMN english TEXT;
```

```
postgres=# SET CLIENT_ENCODING TO 'UTF8';
SET
postgres=# \copy airportpoly TO 'C:/
' CSV HEADER;
COPY 181
```

```
postgres=# SET CLIENT_ENCODING TO 'UTF8';
SET
```

name	english	name:en	place
潮風ビーチ	=GOOGLETRANSLATE(I3, "ja", "en")		
新宮浜		Shingu Hama Beach	
香椎浜		Kashi Beach	

```
UPDATE airportpoly
SET english = NULL
WHERE english = '#VALUE!';
```

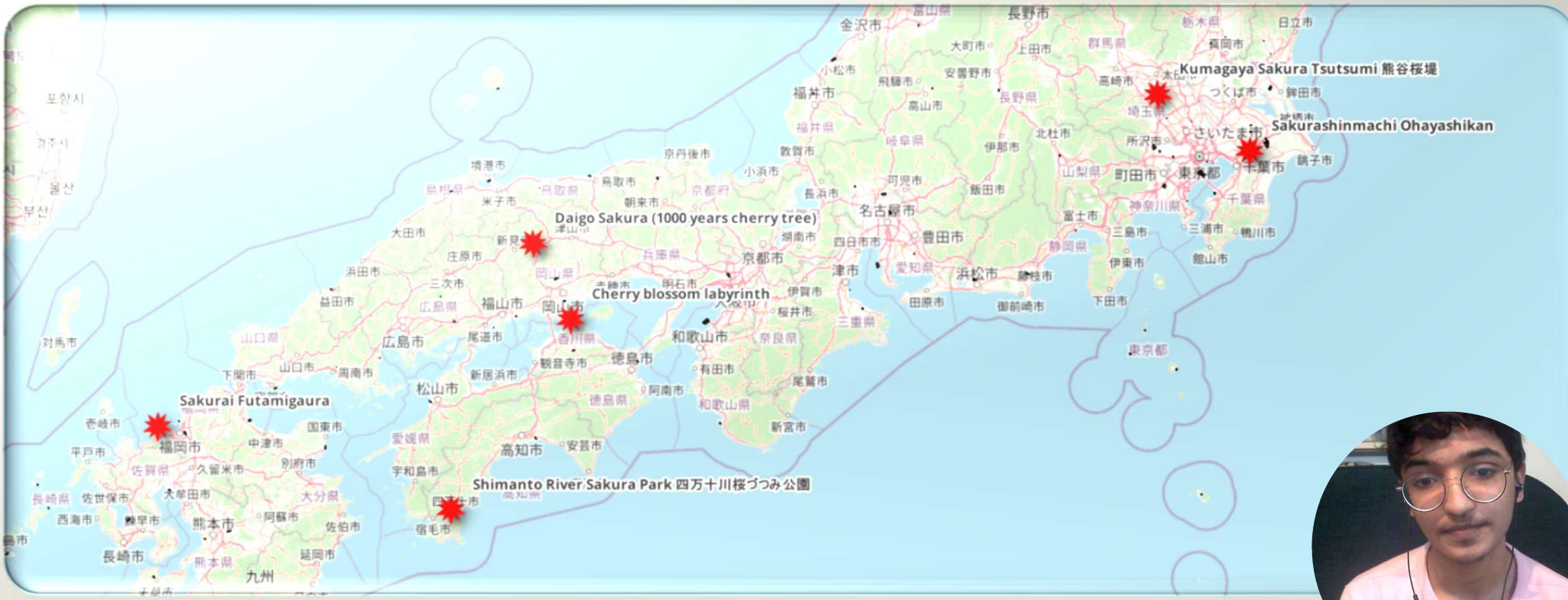
```
TRUNCATE TABLE air
```

```
postgres=# \copy airportpoly FROM 'C:/Us
 DELIMITER ',' CSV HEADER;
COPY 181
```

Spring Season

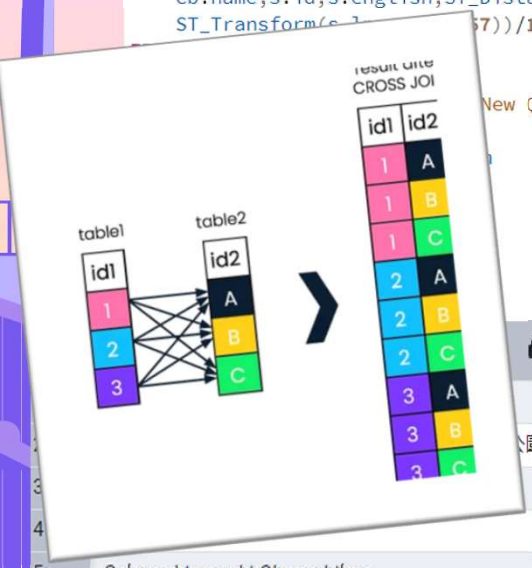
How to get to that location?

Its time for Cherry Blossom aka. Sakura



Nearest Railway line from Cherry Blossom events

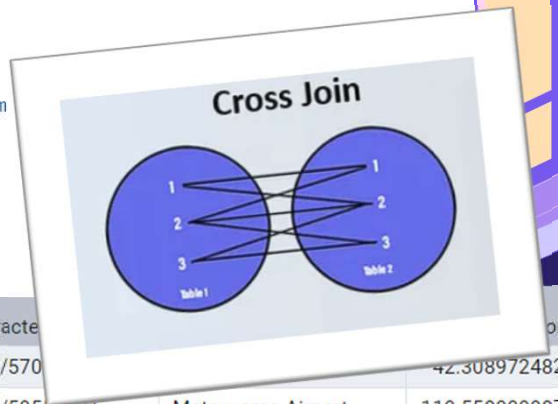
```
--01 Proximity analysis
--nearest railway line from Sakura
SELECT
    cb.name,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.l                    57))/1000 AS distance_km
                                                  New Query
```



		id character varying	english text
		way/449298176	JR Hime Shin Line
2	園	way/492450017	Tosa Kuroshio Railw
3		way/710365144	Joetsu Shinkansen
4		way/666959233	JR Chikuhi Line
5	Sakurashinmachi Ohayashikan	way/182492379	Keisei Main Line
6	Cherry blossom labyrinth	way/869977794	JR Uno Line

Nearest Airport from Cherry Blossom events

```
--nearest airport from Sakura
SELECT
    cb.name,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.polygeom, 3857))/1000 AS distance_km
FROM
   cherry AS cb
CROSS JOIN LATERAL (
    SELECT
        s.id,s.english,s.polygeom
    FROM
        airportpoly AS s
    ORDER BY
        cb.ptgeom <-> s.polygeom
    LIMIT 1
) AS s;
```



	name character varying	id characte		
1	Daigo Sakura (1000 years cherry tree)	way/570		42.308972482
2	Shimanto River Sakura Park 四万十川桜づつみ公園	way/50537531	Matsuyama Airport	110.558000987
3	Kumagaya Sakura Tsutsumi 熊谷桜堤	way/1137004856	Asahi Kawagoe Heliport	26.196165024
4	Sakurai Futamigaura	way/826060643	Nata heliport	32.11150573
5	Sakurashinmachi Ohayashikan	way/463253703	Otone	249608
6	Cherry blossom labyrinth	way/57009997	Oku	1353

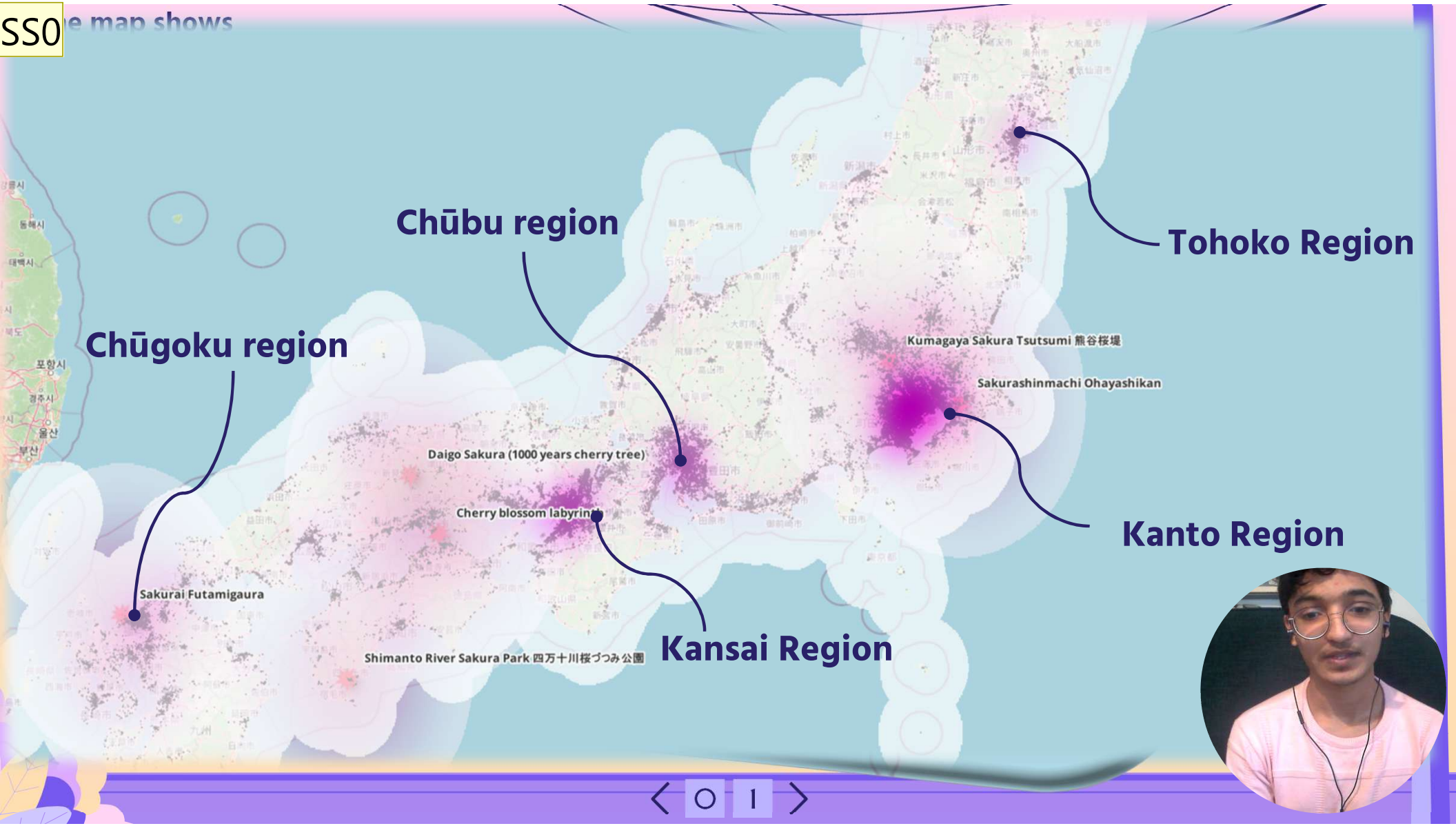
Heatmaps

Cherry Blossoms in Japan: The brighter the color, the more blooms and visitors! 🌸 🌳 Find your perfect spot—whether you love the crowds or crave peace!

*Also added the park data

SS0

e map shows



Slide 10

SS0 Spring in Japan brings cherry blossoms, painting parks and streets in pink hues. Popular spots, especially in regions like Kansai, are easily accessible b
rail and offer direct airport connections, making it easy for visitors to enjoy the season’s beauty

Saihan Saiyed, 2025-01-02T21:43:46.636

Summer Season

Summer in Japan: Where the heat sizzles, the festivals dazzle

Let's head to Japan's iconic Firework Festival!

SS0

How to get to that location?

Nearest Railway line from Fireworks site

```
--nearest railway line from firework
SELECT
    cb.name,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.lngeom, 3857))/1000 AS distance_km
FROM
   firework AS cb
CROSS JOIN LATERAL (
    SELECT
        s.id,s.english,s.lngeom
    FROM
        railway AS s
       where s.english is not NULL
    ORDER BY
        cb.ptgeom <-> s.lngeom
    LIMIT 1
) AS s;
```

	name character varying	id character varying	english text	distance_km double precision
1	Toyohashi Gion Fireworks launch site	way/840517849	JR Iida Line	1.361951882651194

Nearest Airport from Fireworks Site

```
--nearest airport from fireworks
SELECT
    cb.name,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.polygeom, 3857))/1000 AS distance_km
FROM
   firework AS cb
CROSS JOIN LATERAL (
    SELECT
        s.id,s.english,s.polygeom
    FROM
        airportpoly AS s
    ORDER BY
        cb.ptgeom <-> s.polygeom
    LIMIT 1
) AS s;
```

	name character varying	id character varying	english text	distance_km double precision
1	Toyohashi Gion Fireworks launch site	way/42722174	Hamamatsu base	32.9878246743931

JR Iida Line

Slide 14

SS0 Only one firework festival shows up because the data on Overpass is either incomplete, inconsistently tagged, or depends on local contributors

Saihan Saiyed, 2025-01-02T18:42:20.202

SS0

Beside s people to and

Slide 15

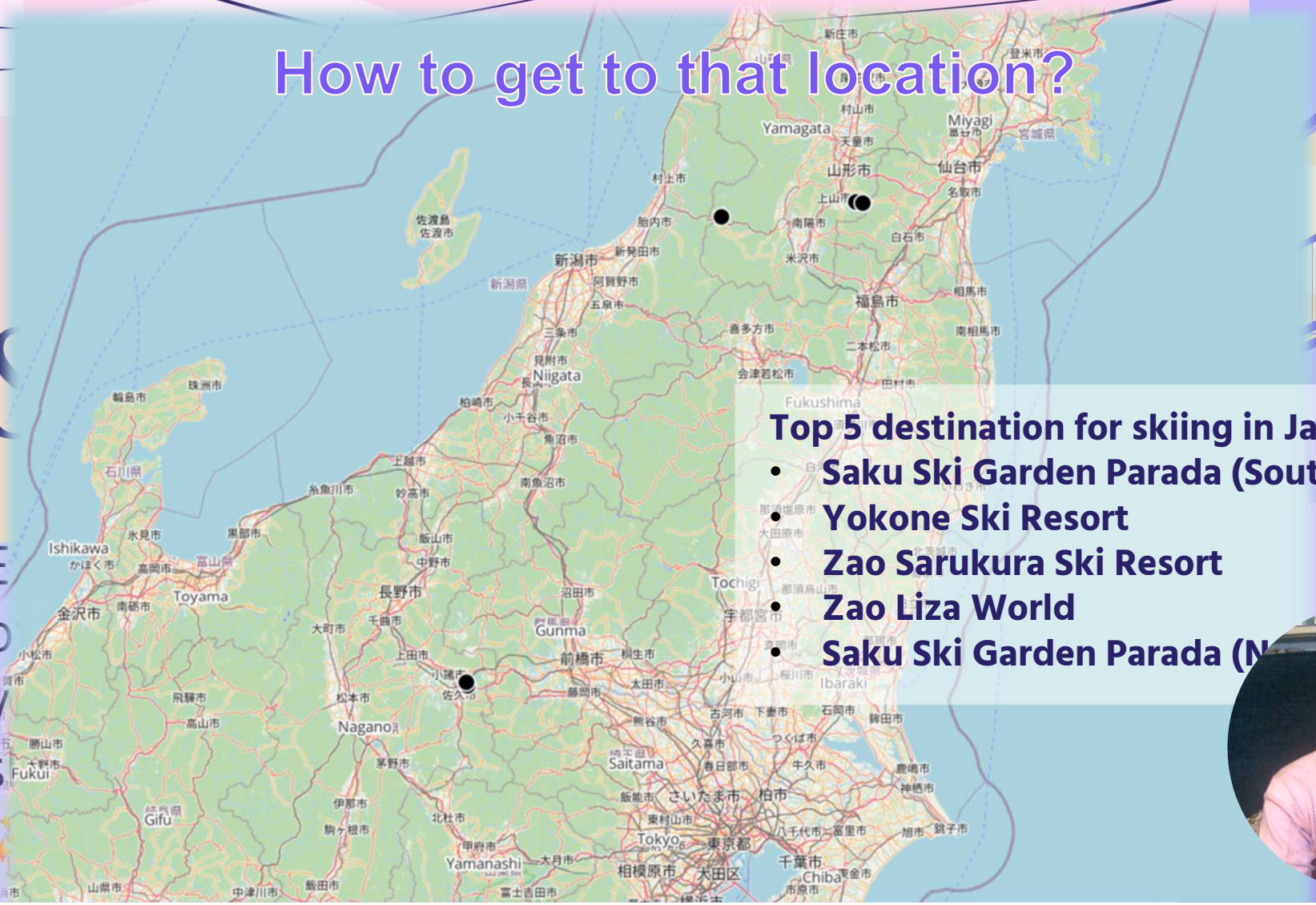
SS0 The beaches are distributed heavily along Japan's coastline, covering most prefectures with access to the sea.

Saihan Saiyed, 2025-01-03T21:20:31.658

02

Winter Season

How to get to that location?



Top 5 destination for skiing in Japan

- **Saku Ski Garden Parada (South)**
- **Yokone Ski Resort**
- **Zao Sarukura Ski Resort**
- **Zao Liza World**
- **Saku Ski Garden Parada (N**

Nearest Railway line from Skiing resorts

```
--03 Proximity analysis
--nearest railway line from skiing site
SELECT
    cb.english,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.lngeom, 3857))/1000 AS distance_km
FROM
   skiing AS cb
CROSS JOIN LATERAL (
    SELECT
        s.id,s.english,s.lngeom
    FROM
        railway AS s
    ORDER BY
        cb.ptgeom <-> s.lngeom
    LIMIT 1
) AS s;
```

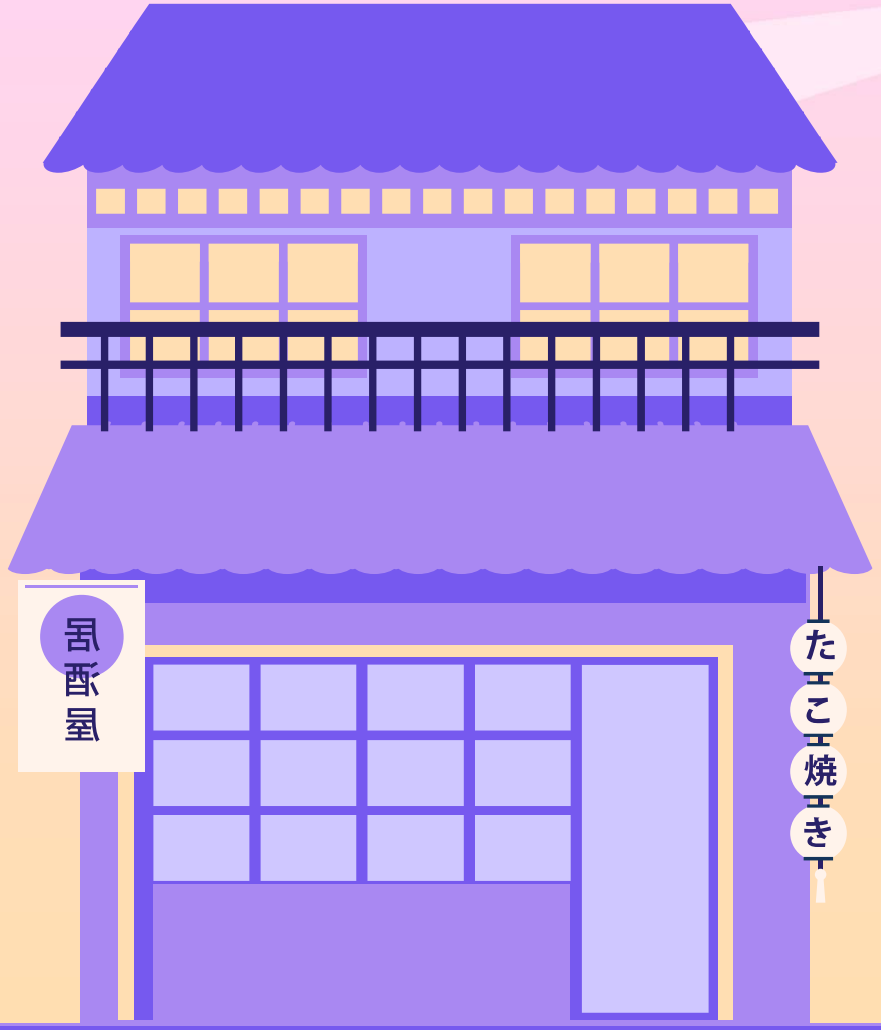
english text	id character varying	english text	distance_km double preci
Saku Ski Garden Parada (Sout...	way/256998777	Hokuriku Shinkansen	3.00809673
Yokone Ski Resort	way/24370779	JR Yonezaka Line	0.46057435
Zao Sarukura Ski Resort	way/1209052924	JR Ou Main Line	10.5336044
Zao Liza World	way/1209052924	JR Ou Main Line	13.691320
Saku Ski Garden Parada (North)	way/256998770	Hokuriku Shinkansen	1.25643610

Nearest Airport from Skiing resorts

```
--nearest airport from skiing site
SELECT
    cb.english,s.id,s.english,ST_Distance(ST_Transform(cb.ptgeom, 3857),
    ST_Transform(s.polygeom, 3857))/1000 AS distance_km
FROM
   skiing AS cb
CROSS JOIN LATERAL (
    SELECT
        s.id,s.english,s.polygeom
    FROM
        airportpoly AS s
    ORDER BY
        cb.ptgeom <-> s.polygeom
    LIMIT 1
) AS s;
```

	english text	id character varying	english text	distance_km double precision
1	Saku Ski Garden Parada (Sout...	way/1305844890	Futaba	81.850252910103
2	Yokone Ski Resort	way/1136928550	Yonezawa heliport	53.282235184732
3	Zao Sarukura Ski Resort	way/57008614	Yamagata Airport	75903589549
4	Zao Liza World	way/57008614	Yamagata Airpo	03870
5	Saku Ski Garden Parada (North)	way/57007466	Shinshu Mat	15

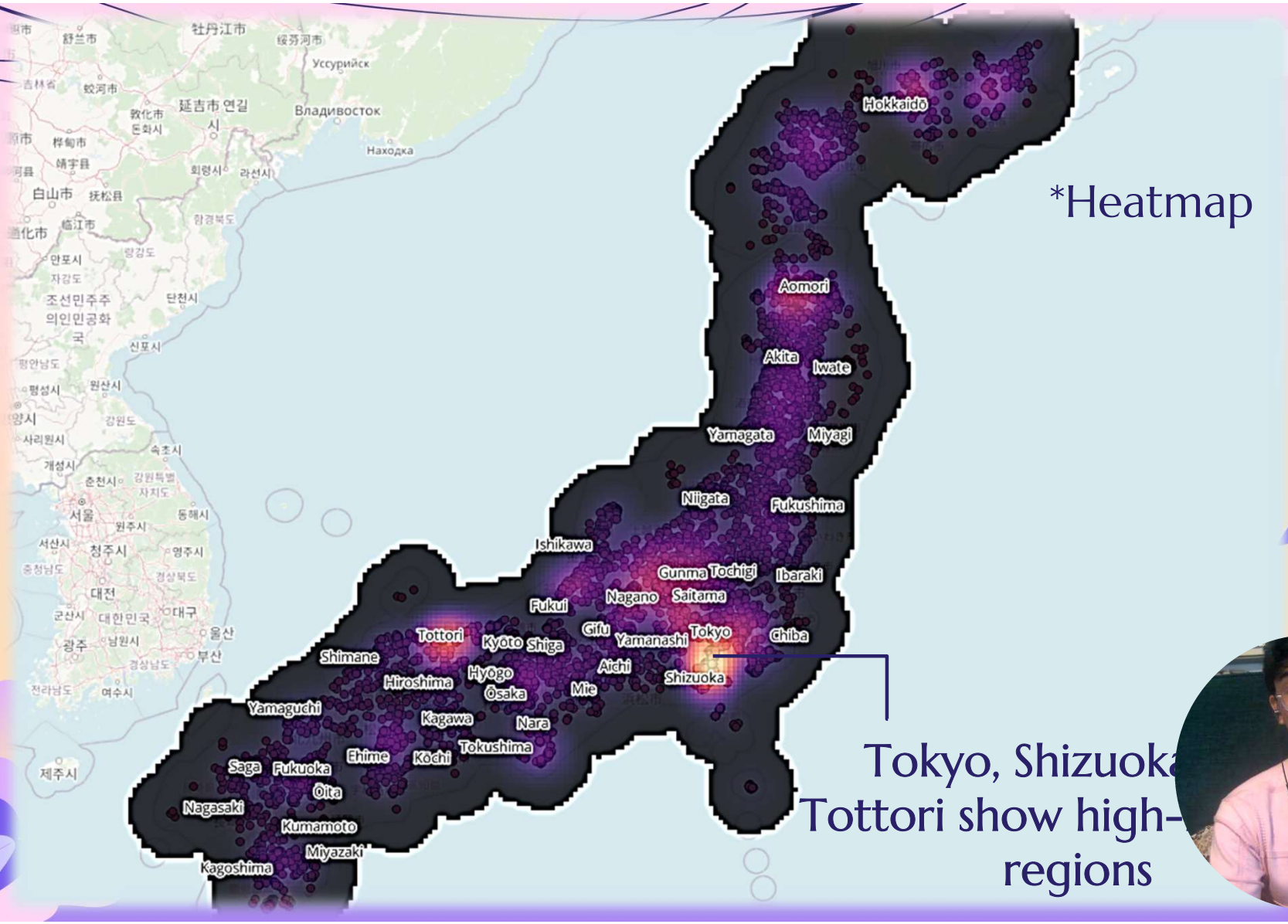
Futaba, Yonezawa heliport, Yamagata Airport, Yamagata
Shinshu Matsumoto Airport



Hot Springs ♨️

Relax and unwind in Japan's soothing hot springs, surrounded by stunning natural beauty! ✨ 🌸

SS1



*Heatmap

Tokyo, Shizuoka
Tottori show high-
regions

Slide 21

SS0 This heatmap represents the distribution of hot springs (onsen) across Japan, with the intensity of the color (pink to purple) indicating the concentration of hot spring locations in various regions.
Saihan Saiyed, 2025-01-04T18:29:11.584

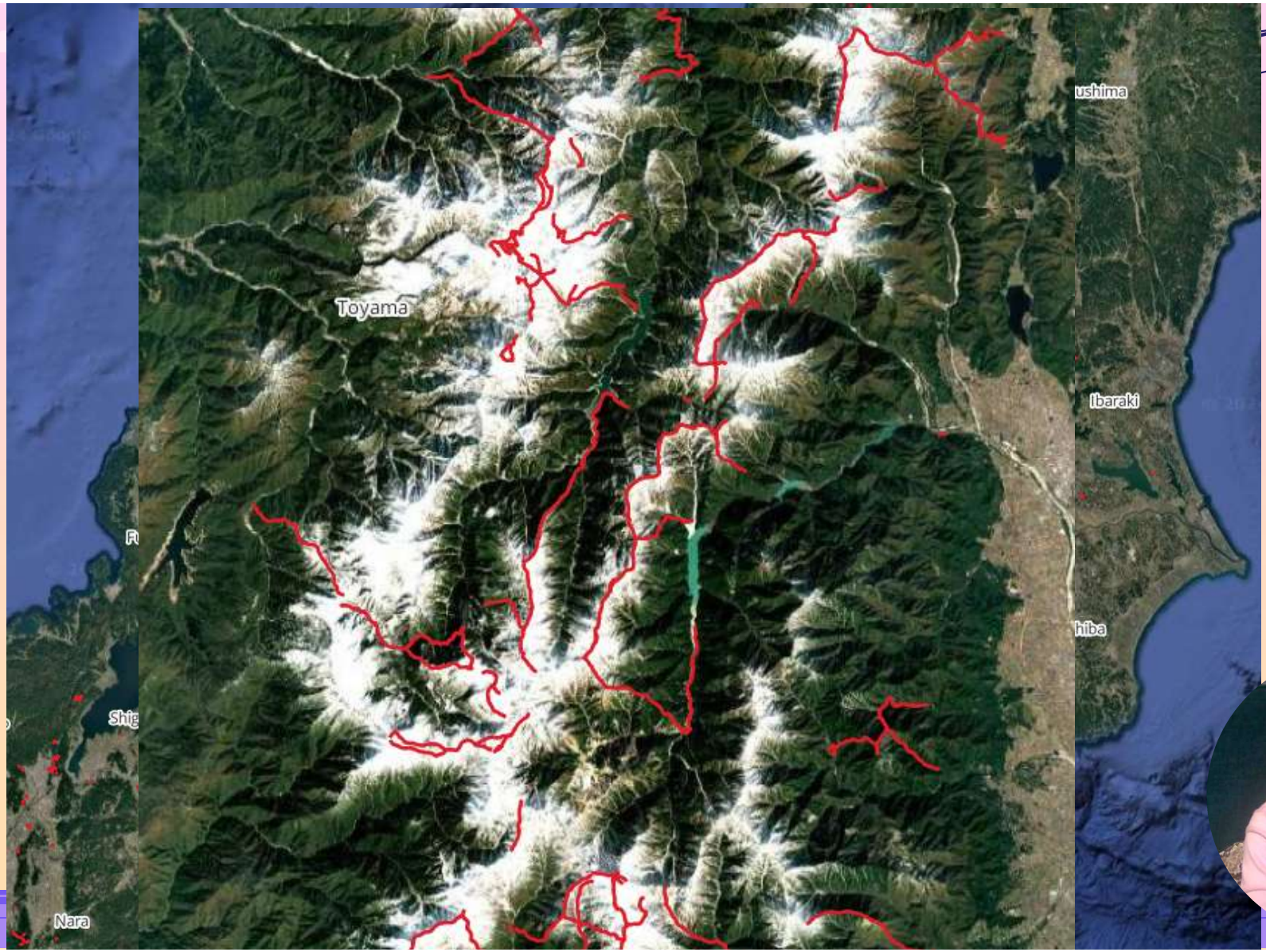
SS1 Japan's hot springs are a national treasure, with diverse geographical patterns reflecting its volcanic activity
Saihan Saiyed, 2025-01-04T18:29:16.874

Year-Round attractions

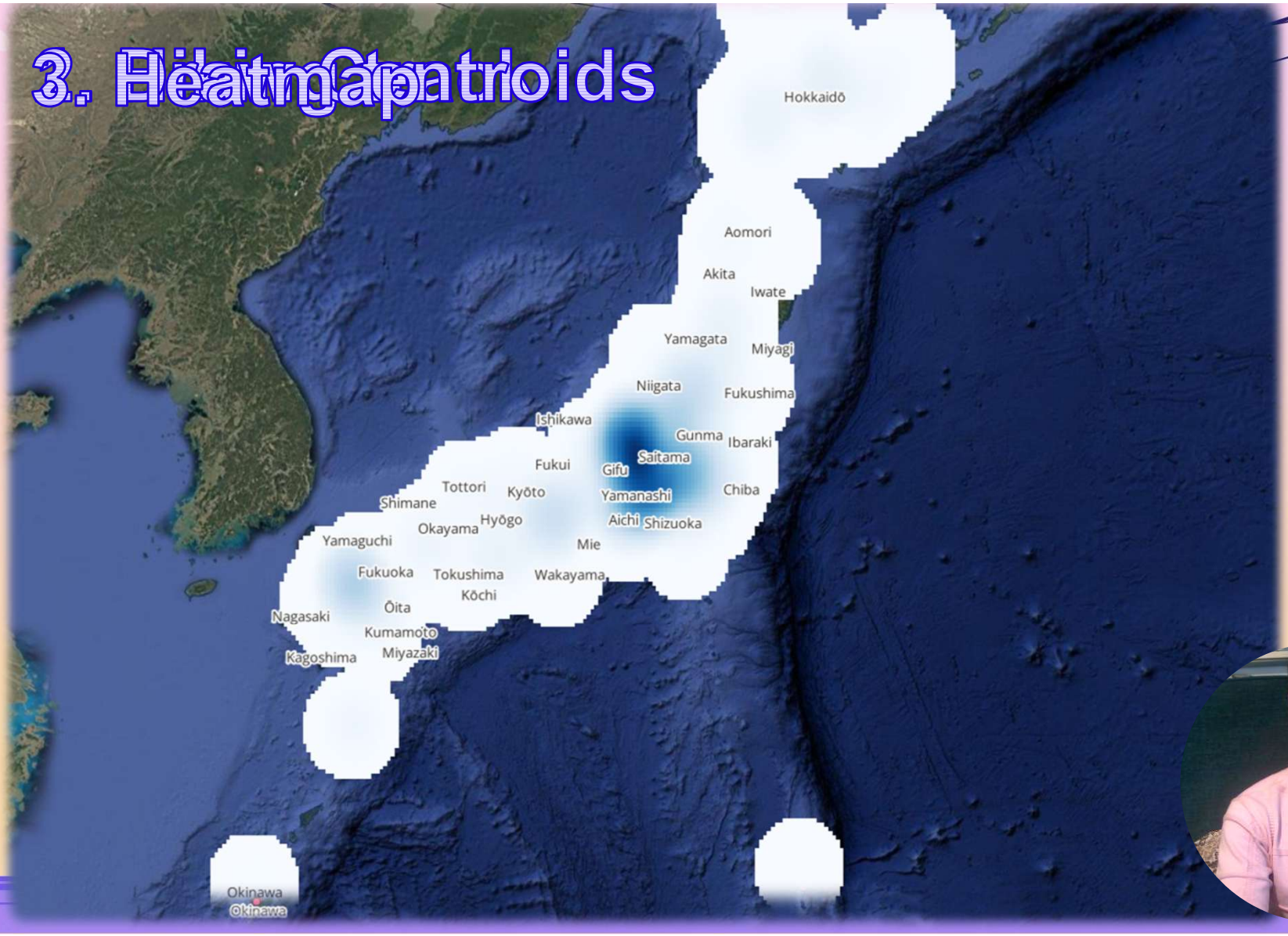
Hiking 🚶‍♀️ 🗻

Map View

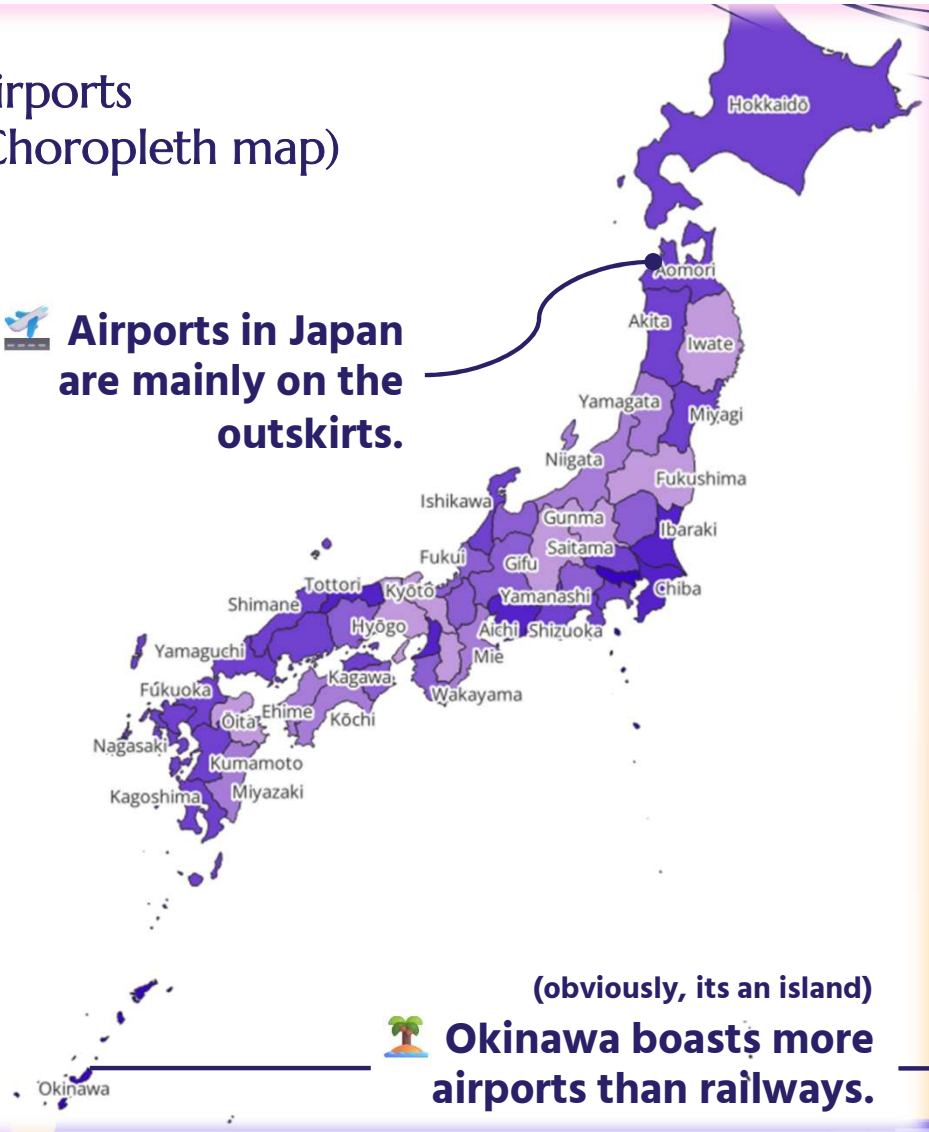
Enjoy energizing hikes with stunning natural beauty. 🌸 🍁


Toyama
ushima
Ibaraki
hiba
Nara

3. Heatmap of Japan Patriots



Airports (Choropleth map)

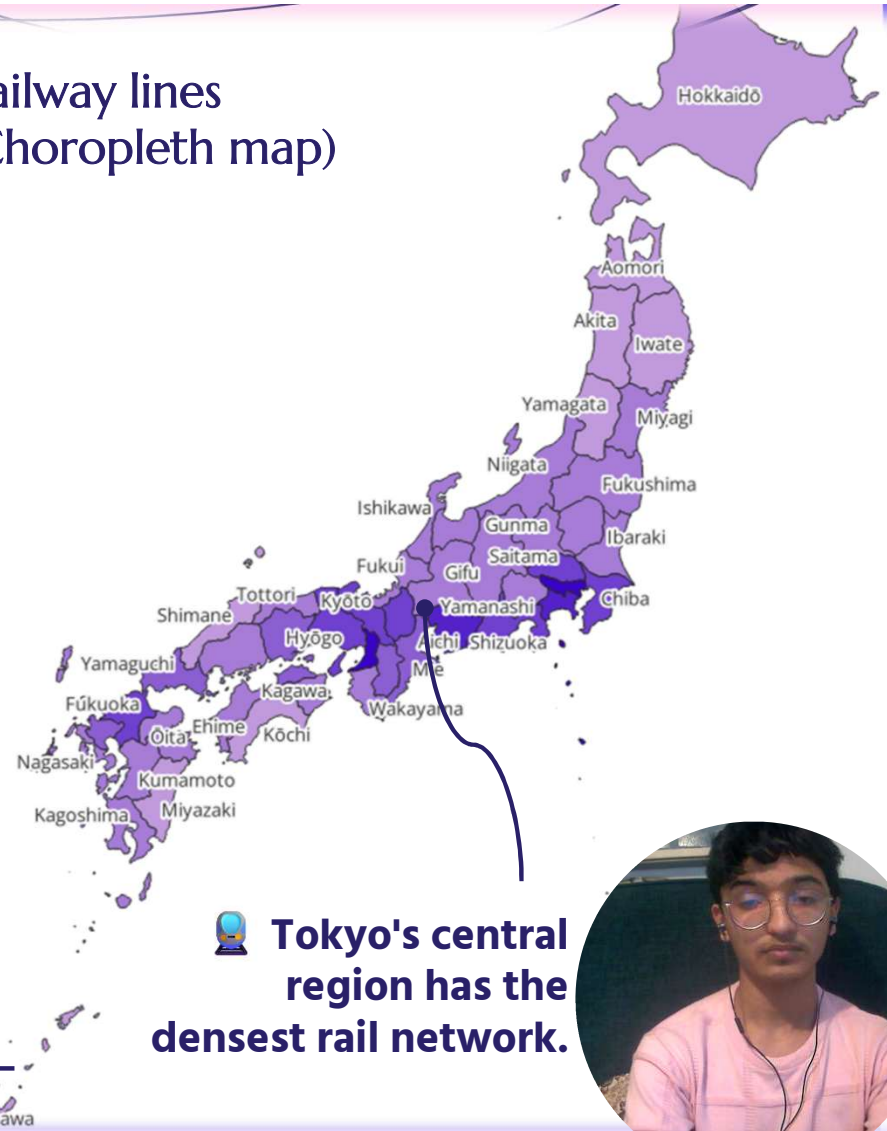


🛬 **Airports in Japan are mainly on the outskirts.**

(obviously, its an island)

🏝️ **Okinawa boasts more airports than railways.**

Railway lines (Choropleth map)



🚆 **Tokyo's central region has the densest rail network.**

This presentation analyzes Japan's tourist attractions and accessibility using data and mapping techniques:

Data Sources: Information on *fireworks, cherry blossoms, parks, beaches, hiking, skiing, hot springs, railways, airports, and Japan's shape file* was gathered from Overpass Turbo.

- **Accessibility**: SQL queries identified the nearest railway stations and airports to major attractions.
- **Clustering**: Heatmaps highlighted areas with high concentrations of tourist activities.
- **Density Mapping**: Choropleth maps showed transport service accessibili across different regions.

THANKS!

CS621C[A] — Spatial Databases

"My Geospatial Story"

Saiyed Mohammad Saihan

24251447