BARCELONA NEIGHBORHOODS

Data Project Week 2

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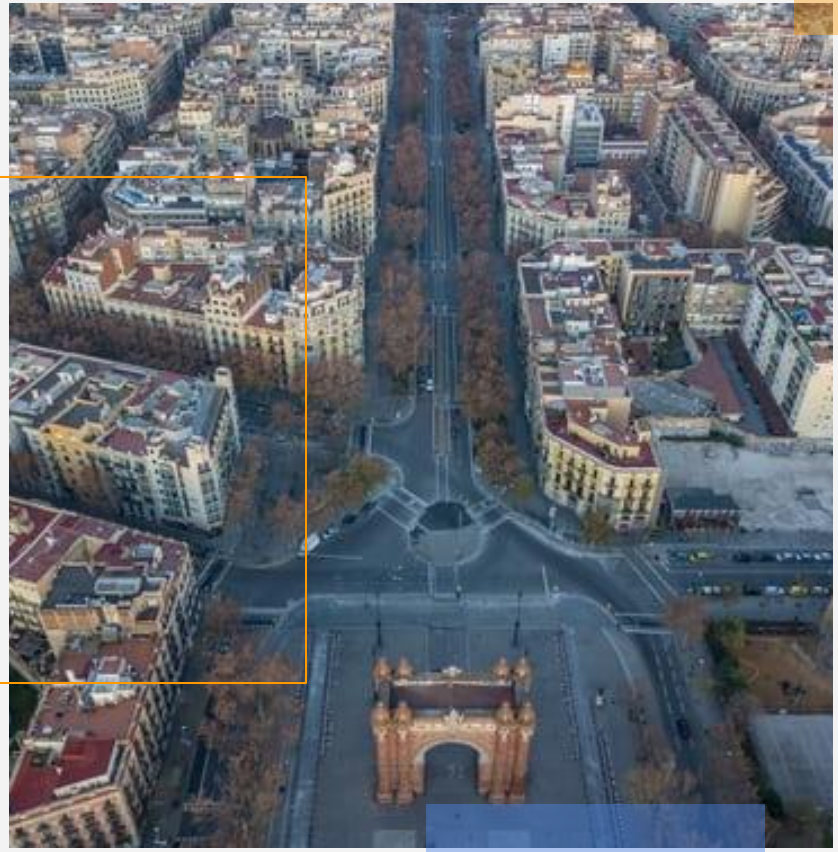
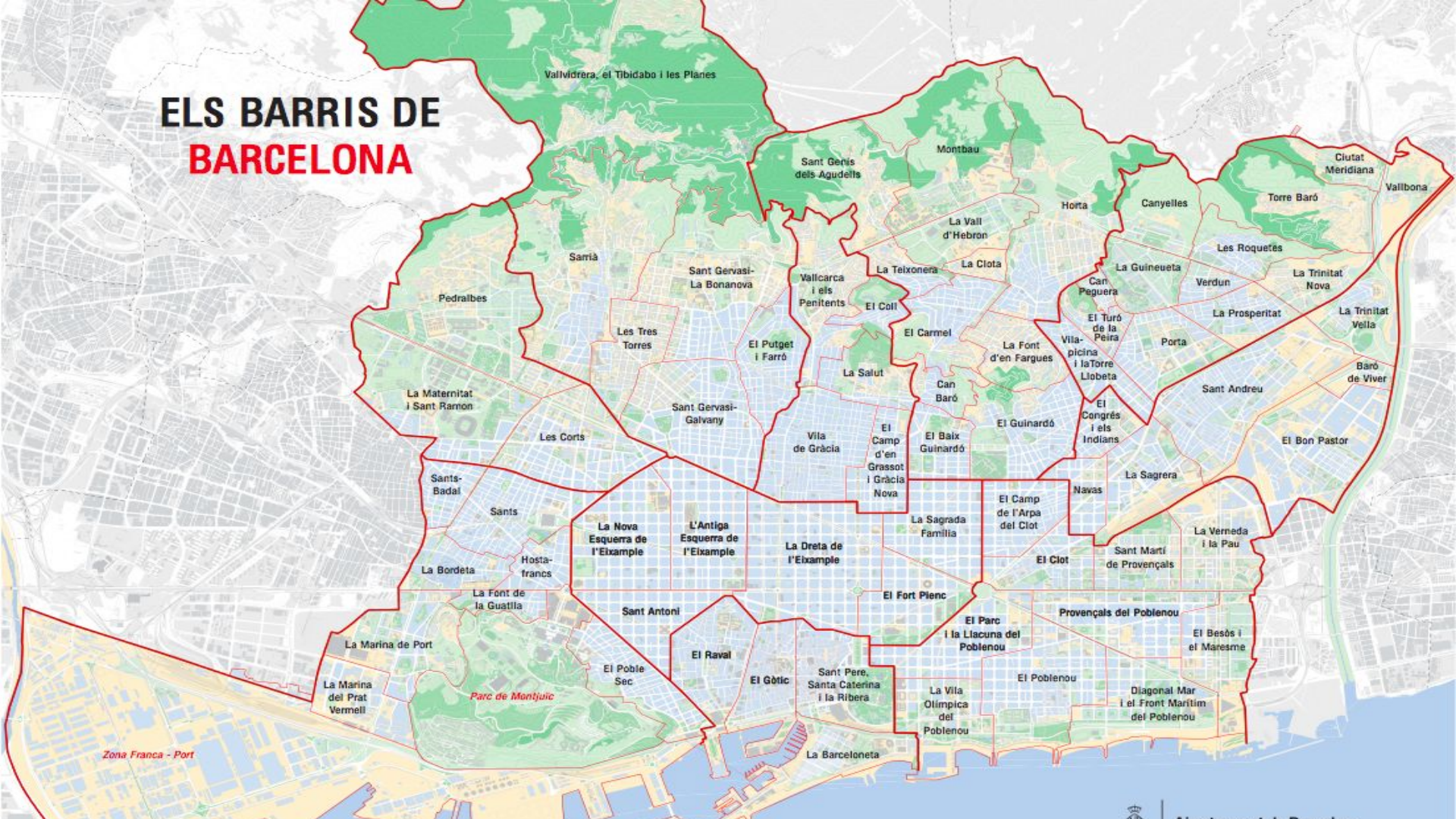


ELS BARRIS DE BARCELONA



PRESENTATION STRUCTURE

1. RESEARCH QUESTIONS
2. DATA SOURCES
3. DATA ACCESSING
4. INSIGHTS
5. FUTURE RESEARCH
6. CHALLENGES

RESEARCH QUESTIONS

1. In which neighborhood in Barcelona is unemployment highest?
2. In which neighborhood in Barcelona is immigrant population the highest?
3. Is there a relation between immigrants and unemployment in the neighborhoods?

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DATA SOURCES

1 DATASET ON UNEMPLOYMENT

UNEMPLOYMENT

- 73 Barcelona Neighborhoods
- Gender
- Years 2015 - 2017
- Months

DATA SOURCES

2

DATASET ON IMMIGRANTS BY NATIONALITY

IMMIGRANTS BY NATIONALITY

- 73 Barcelona Neighborhoods
- Nationality
- Years 2013 - 2017

DATA SOURCES

3

DATASET ON BARCELONA POPULATION

POPULATION

- 73 Barcelona neighborhoods
- Gender
- Years
- Age ranges

DATA SOURCES

1

UNEMPLOYMENT

DATA SOURCES

1

UNEMPLOYMENT

IMMIGRANTS BY NATIONALITY

2

DATA SOURCES

1

UNEMPLOYMENT

IMMIGRANTS BY NATIONALITY

2

3

POPULATION

DATA SOURCES

1

UNEMPLOYMENT

NEIGHBORHOOD ID

IMMIGRANTS BY NATIONALITY

2

3

POPULATION

DATA ACCESSING

Data cleaning

UNEMPLOYMENT DATASET

- kept January to easily match other datasets
- removed all non registered unemployment

IMMIGRATION DATASET

dropped approx. 700 rows out of 35224 (1.97%) without info on neighborhoods, nationality or where Nationality = Spain

Neighborhood Code	Nationality
99	No information
99	No information

POPULATION DATASET

dropped all age ranges that were not within the working age (29930 out of 70080, 42%)

DATA ACCESSING

Data manipulation

- renaming columns that were not meaningful or comparable over datasets
- reorder columns
- merge datasets together

```
merged_unemp_immigr = unemployment_agg.merge(immigrants_agg, on= ['Neighborhood Code'])
Barcelona_Neighborhoods = merged_unemp_immigr.merge(population_agg, on= ['Neighborhood Code'])
```

Neighborhood Code	Neighborhood Name	Registered Unemployed	Total Immigrants	Total Residents
1	el Raval	3559	4946	37271
2	el Barri Gòtic	949	2537	13045
3	la Barceloneta	1062	1666	11529
4	Sant Pere, Santa Caterina i la Ribera	1466	2607	18010
5	el Fort Pienc	1368	1990	23230

ANSWERS TO OUR RESEARCH QUESTIONS

1

In which neighborhood in Barcelona is unemployment highest?

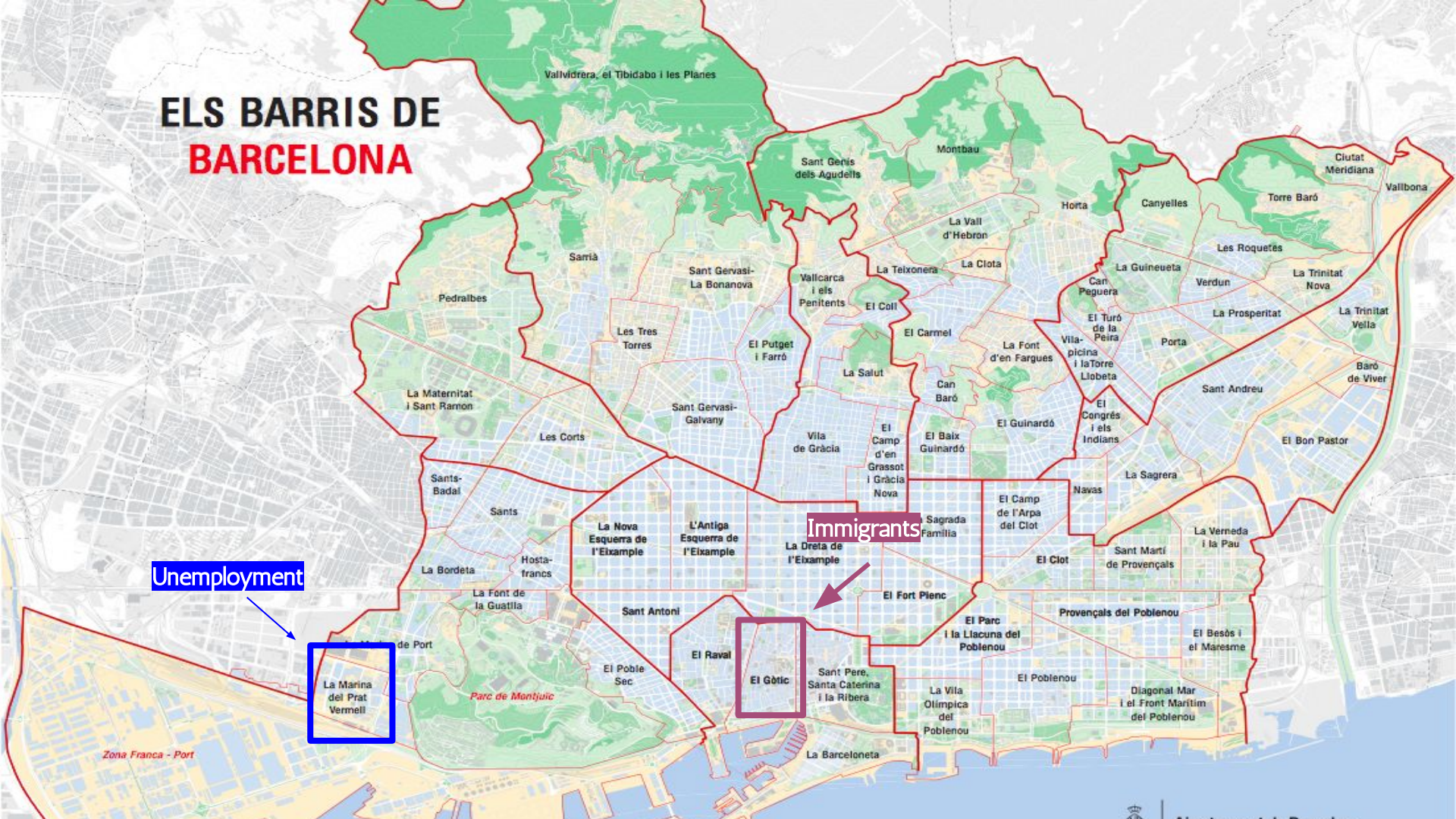
Neighborhood Code	Neighborhood Name	% Unemployed 2017	% Unemployed 2016	% Unemployed 2015
12	la Marina del Prat Vermell	15.024038	18.149038	18.091698
55	Ciutat Meridiana	13.544828	16.027586	17.488295
53	la Trinitat Nova	13.244134	15.609851	17.250832
57	la Trinitat Vella	12.623110	14.939659	16.092425
56	Vallbona	12.282609	14.673913	16.424581

ANSWERS TO OUR RESEARCH QUESTIONS

2

In which neighborhood in Barcelona is immigrant population the highest?

Neighborhood Code	Neighborhood Name	% Immigrants 2017	% Immigrants 2016	% Immigrants 2015
2	el Barri Gòtic	19.448064	15.638176	16.512730
4	Sant Pere, Santa Caterina i la Ribera	14.475292	12.315380	13.453372
3	la Barceloneta	14.450516	12.542285	12.884785
1	el Raval	13.270371	11.958359	13.197763
8	l'Antiga Esquerra de l'Eixample	10.287892	8.613952	8.786680


ELS BARRIS DE
BARCELONA
Vallvidrera, el Tibidabo i les Planes
Sant Genís dels Agudells
Montbau
Horta
Canyelles
Ciutat Meridiana
Vallbona
Torre Baró
La Vall d'Hebron
Les Roquetes
La Teixonera
La Clota
La Guineueta
La Trinitat Nova
Sarrià
Sant Gervasi-La Bonanova
Vallcarca i els Penitents
Can Peguera
Verdun
La Prosperitat
La Trinitat Vella
Pedralbes
El Coll
El Turó de la Peira
Les Tres Torres
El Putget i Farró
El Carmel
La Font d'en Fargues
Vila-picina i la Torre Llobeta
Porta
Baró de Viver
La Salut
Can Baró
Sant Andreu
La Maternitat i Sant Ramon
Sant Gervasi-Galvany
El Congrés i els Indians
Les Corts
Vila de Gràcia
El Camp d'en Grassot i Gràcia Nova
El Baix Guinardó
El Guinardó
El Bon Pastor
Sants-Badal
La Sagrera
Sants
Navas
El Camp de l'Arpa del Clot
La Nova Esquerra de l'Eixample
L'Antiga Esquerra de l'Eixample
Sagrada Família
La Verneda i la Pau
La Dreta de l'Eixample
Hostafrancs
La Bordeta
El Clot
Sant Martí de Provençals
La Font de la Guatlla
El Fort Pienc
Sant Antoni
Provençals del Poblenou
El Parc i la Llacuna del Poblenou
El Besòs i el Maresme
El Raval
El Poble Sec
El Gòtic
Sant Pere, Santa Caterina i la Ribera
El Poblenou
La Vila Olímpica del Poblenou
Diagonal Mar i el Front Marítim del Poblenou
Parc de Montjuic
La Barceloneta
Zona Franca - Port
La Marina del Prat Vermell
Unemployment
Immigrants

ANSWERS TO OUR RESEARCH QUESTIONS

3

Is there a relation between immigrants and unemployment?

Neighborhood Code	Neighborhood Name	% Unemployed 2017	% Unemployed 2016	% Unemployed 2015
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MAIN INSIGHTS

1

The neighborhood with the highest unemployment rate is *La Marina del Prat Vermell*

- TOP 5 unemployment neighborhoods consistent over years 2015,2016, & 2017
- Unemployment rate decreasing throughout the years in the neighborhoods

2

The neighborhood with the highest immigration rate is *El Barri Gotic*

- TOP 5 immigrant neighborhoods almost consistent over years 2015,2016, & 2017
- Immigrants increasing over the years in the neighborhoods

3

Immigrants and unemployment do not seem to be related with regards to the neighborhoods

MORE INSIGHTS AND FUTURE RESEARCH

- Gender differences in unemployment

Neighborhood Code	Neighborhood Name	Female to Male Unemployment	Female Unemployment	Male Unemployment
12	la Marina del Prat Vermell	0.736111	53	72
53	la Trinitat Nova	0.962644	335	348
55	Ciutat Meridiana	0.948413	478	504
56	Vallbona	0.948276	55	58
57	la Trinitat Vella	0.948608	443	467

- Nationality

Neighborhood Code	Neighborhood Name	Nationality	Number
12	la Marina del Prat Vermell	Peru	3
53	la Trinitat Nova	Honduras	57
55	Ciutat Meridiana	Honduras	163
56	Vallbona	Pakistan	9
57	la Trinitat Vella	Pakistan	103

FUTURE RESEARCH

- Visualization on map
- Public Transportation in Neighborhoods
- Schools in Neighborhood
- How to decrease unemployment in affected neighborhoods

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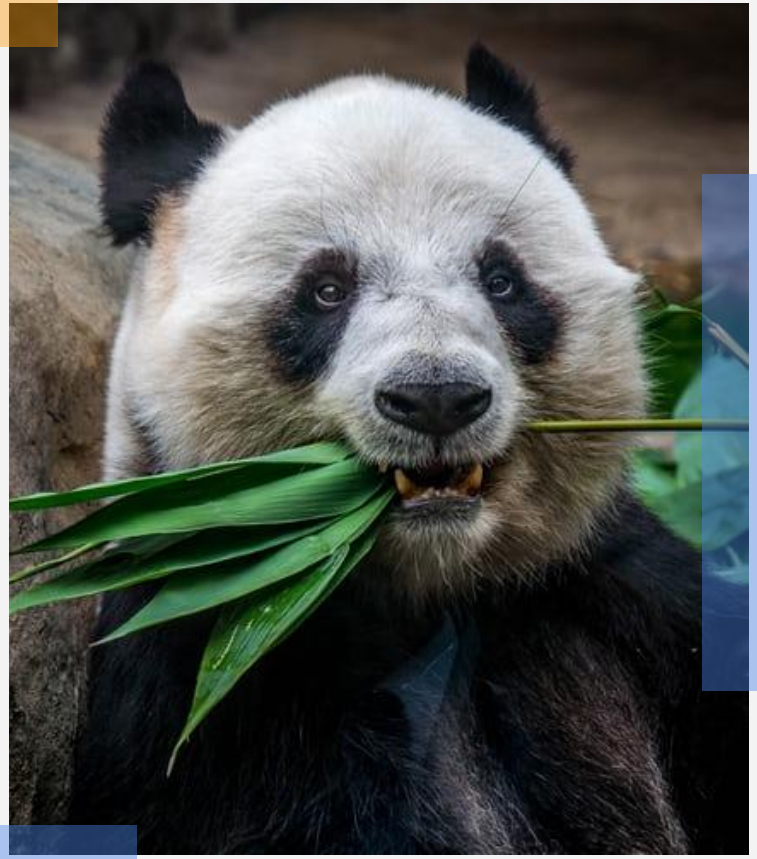
CHALLENGES...



QUESTIONS?