

# PIRATES TRAVEL INDEX

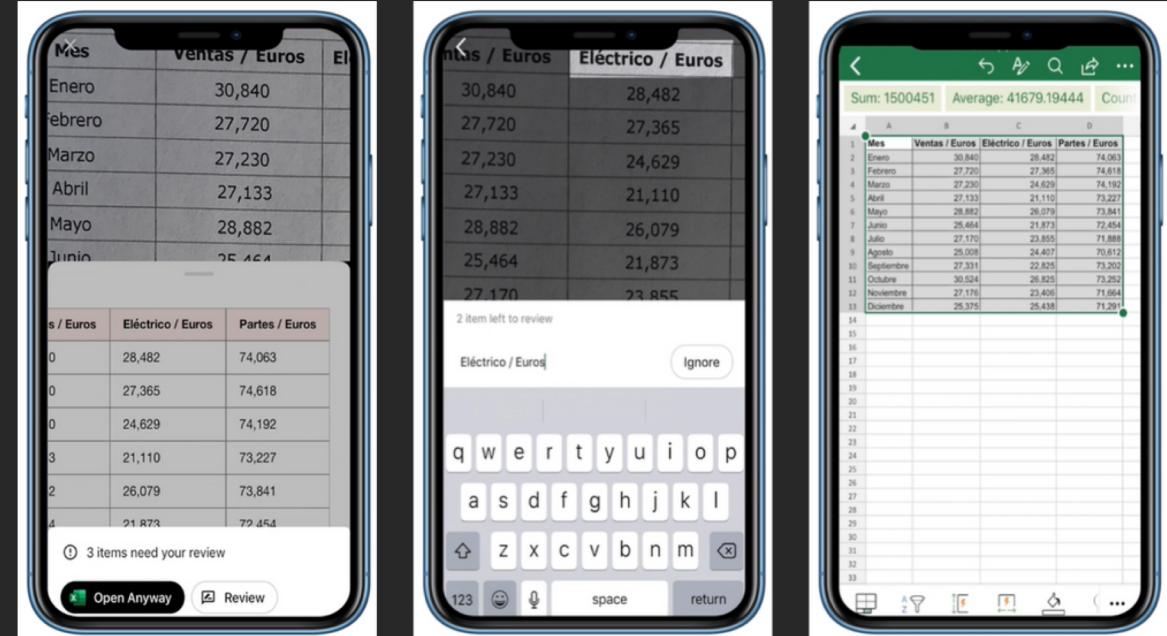
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# PROBLEM STATEMENT

- AS A TEAM OF HIGH-TECH PIRATES, WE WANT TO KNOW WHAT ARE THE BEST PLACES TO TARGET TO ROB TOURISTS WITH TOO MUCH MONEY
- ONLINE TOP TOURIST DESTINATION LISTS BY BLOGGERS ARE TOO SUBJECTIVE. WE WANT TO USE DATA!
- GOALS:
  - CREATE MAPS THAT TRACK AMOUNT OF TOURISTS AND HOW MUCH THEY ARE SPENDING TO TRY TO DISCOVER PATTERNS IN THEIR BEHAVIOR
  - USE THE ANNUAL WORLD HAPPINESS REPORT TO SEE IF THERE ARE ANY QUALITIES THAT MAY CONTRIBUTE TO TOURISM FOR CITIES
  - RANK THE TOP 10 TOURIST DESTINATIONS ACCORDING TO NUMBER OF TOURISTS, EXPENDITURES, AND THEIR DENSITY INDEX (I.E. NUMBER OF TOURISTS VS. LOCAL POPULATION RATIO)

# DATA COLLECTION PROCESS

- GET MASTERCARD GLOBAL DESTINATION CITIES INDEX (GDCI) PDFS AND SCRAPE DATA USING EXCEL MOBILE APP (TAKE PICTURES AND TRANSFORM TO EXCEL TABLES)
- COLLECT OTHER DATA FROM SOURCES (U.N., WORLD BANK, WORLD HAPPINESS REPORT). ALREADY IN TABLE FORMAT SO ALSO GOOD CANDIDATES FOR SQL TABLES
- USE SQLALCHEMY TO WRITE DATA TO POSTGRES DATABASE IN HEROKU (10K ROW LIMIT ON FREE TIER)



The image displays three screenshots of the Microsoft Excel mobile application on an iPhone. The first screenshot shows a table with columns for Mes (Month), Ventas / Euros (Sales / Euros), and Eléctrico / Euros (Electric / Euros). The second screenshot shows a table with columns for Mes, Ventas / Euros, Eléctrico / Euros, and Partes / Euros. A keyboard is visible at the bottom. The third screenshot shows a table with columns for Mes, Ventas / Euros, Eléctrico / Euros, and Partes / Euros, along with a summary row at the bottom: Sum: 1500451, Average: 41679.19444. The bottom of the screen shows various Excel navigation icons.

Mes	Ventas / Euros	Eléctrico / Euros
Enero	30,840	28,482
febrero	27,720	27,365
Marzo	27,230	24,629
Abril	27,133	21,110
Mayo	28,882	26,079
Junio	25,464	21,873
	27,170	23,855

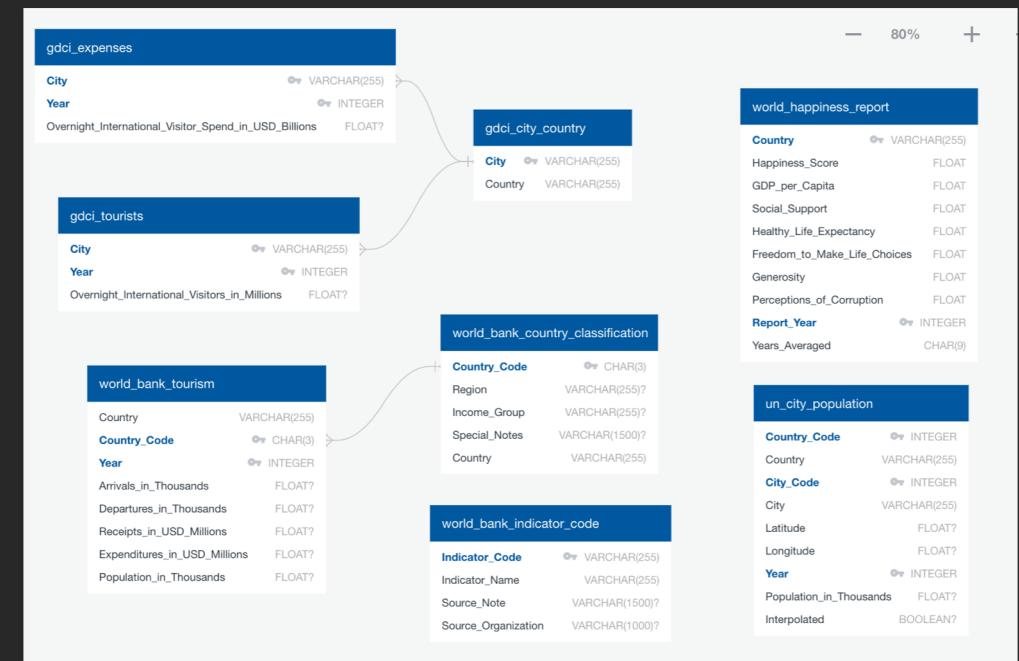
Mes	Ventas / Euros	Eléctrico / Euros	Partes / Euros
0	28,482	74,063	
0	27,365	74,618	
0	24,629	74,192	
3	21,110	73,227	
2	26,079	73,841	
4	21,873	72,454	

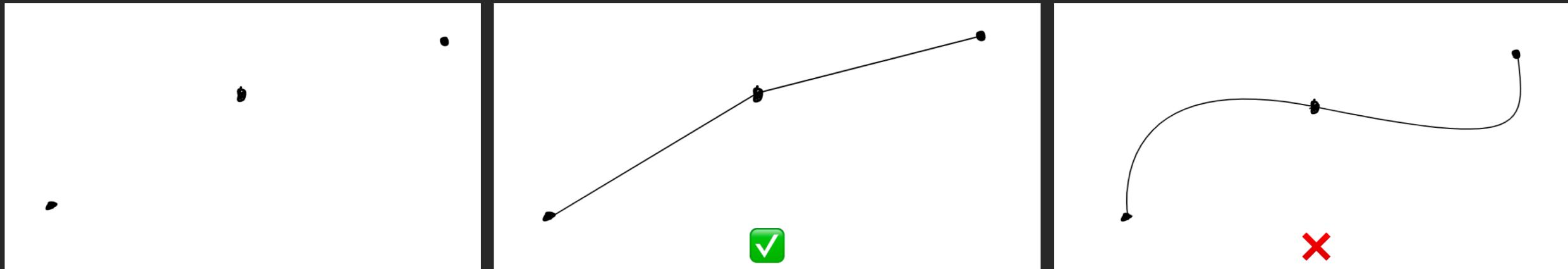
Mes	Ventas / Euros	Eléctrico / Euros	Partes / Euros
1	30,840	28,482	74,063
2	27,720	27,365	74,618
3	27,230	24,629	74,192
4	27,133	21,110	73,227
5	28,882	26,079	73,841
6	25,464	21,873	72,454
7	27,170	23,855	71,888
8	25,008	24,407	70,612
9	27,331	22,825	73,202
10	30,524	26,825	73,252
11	27,176	23,406	71,664
12	25,375	25,438	71,291
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# DATA CLEANING PROCESS

- INCONSISTENT DATA TO BE FIXED (EX: COUNTRY NAMES)
- INCONSISTENT UNITS (EX: MILLIONS VS. THOUSANDS)
- MISSING YEARS RESULTED IN MISSING DATA (SOLVED BY INTERPOLATION)
- PIPE DATA TO FLASK ENDPOINTS TO RETRIEVE AND RETURN FOR VISUALIZATIONS



# INTERPOLATION



# DEMO

- [HTTPS://PIRATES-TRAVEL-INDEX.HEROKUAPP.COM/](https://pirates-travel-index.herokuapp.com/)

# DATA SOURCES & RESOURCES

- [HTTPS://NEWSROOM.MASTERCARD.COM/WP-CONTENT/UPLOADS/2019/09/GDCI-GLOBAL-REPORT-FINAL-1.PDF](https://NEWSROOM.MASTERCARD.COM/WP-CONTENT/UPLOADS/2019/09/GDCI-GLOBAL-REPORT-FINAL-1.PDF)
- [HTTPS://WORLDHAPPINESS.REPORT/](https://WORLDHAPPINESS.REPORT/)
- [HTTPS://DATA.WORLDBANK.ORG](https://DATA.WORLDBANK.ORG)
- [HTTPS://POPULATION.UN.ORG/WUP/DOWNLOAD/](https://POPULATION.UN.ORG/WUP/DOWNLOAD/)
  - [HTTPS://POPULATION.UN.ORG/WUP/DOWNLOAD/FILES/WUP2018-F12-CITIES\\_OVER\\_300K.xls](https://POPULATION.UN.ORG/WUP/DOWNLOAD/FILES/WUP2018-F12-CITIES_OVER_300K.xls)
- [HTTPS://D3PLUS.ORG/](https://D3PLUS.ORG/)
- [HTTPS://API.MAPBOX.COM/STYLES/v1/TEMPGEOCENT/CJ2QE6QID003A2RMRQUVQGBCX.HTML?TITLE=TRUE&ACCESS\\_TOKEN=PK.EYJ1IjoiDGVTCGDLB2NlBNQiLCJhIjoiY2l1YTNMENEyMDAwDDJ6cWZxBG55YJG4OSJ9.QRTz4Pi3096MtXKc\\_QGPWQ#15/37.0229/-76.34211](https://API.MAPBOX.COM/STYLES/v1/TEMPGEOCENT/CJ2QE6QID003A2RMRQUVQGBCX.HTML?TITLE=TRUE&ACCESS_TOKEN=PK.EYJ1IjoiDGVTCGDLB2NlBNQiLCJhIjoiY2l1YTNMENEyMDAwDDJ6cWZxBG55YJG4OSJ9.QRTz4Pi3096MtXKc_QGPWQ#15/37.0229/-76.34211)

# FUTURE POSSIBLE WORK

- LOOK AT COUNTRY LEVEL TOURIST ARRIVALS (WE ONLY LOOKED AT CERTAIN CITIES IN THIS ANALYSIS)
- COMPARE COUNTRY LEVEL ARRIVALS/DEPARTURES
- COMPARE TOURIST EXPENDITURES VS RECEIPTS
- IF WE HAD PERFECT DATA:
  - LOOK AT SEASONAL TOURIST TRENDS IN EACH COUNTRY/CITY
  - LOOK AT WHICH COUNTRIES TOURISTS ARE COMING FROM TO SEE TOP DESTINATIONS FROM EACH COUNTRY
  - LOOK AT AVERAGE LENGTH OF STAY IN EACH COUNTRY/CITY
  - LOOK AT SMALL TOWN TOURISM

Q/A