

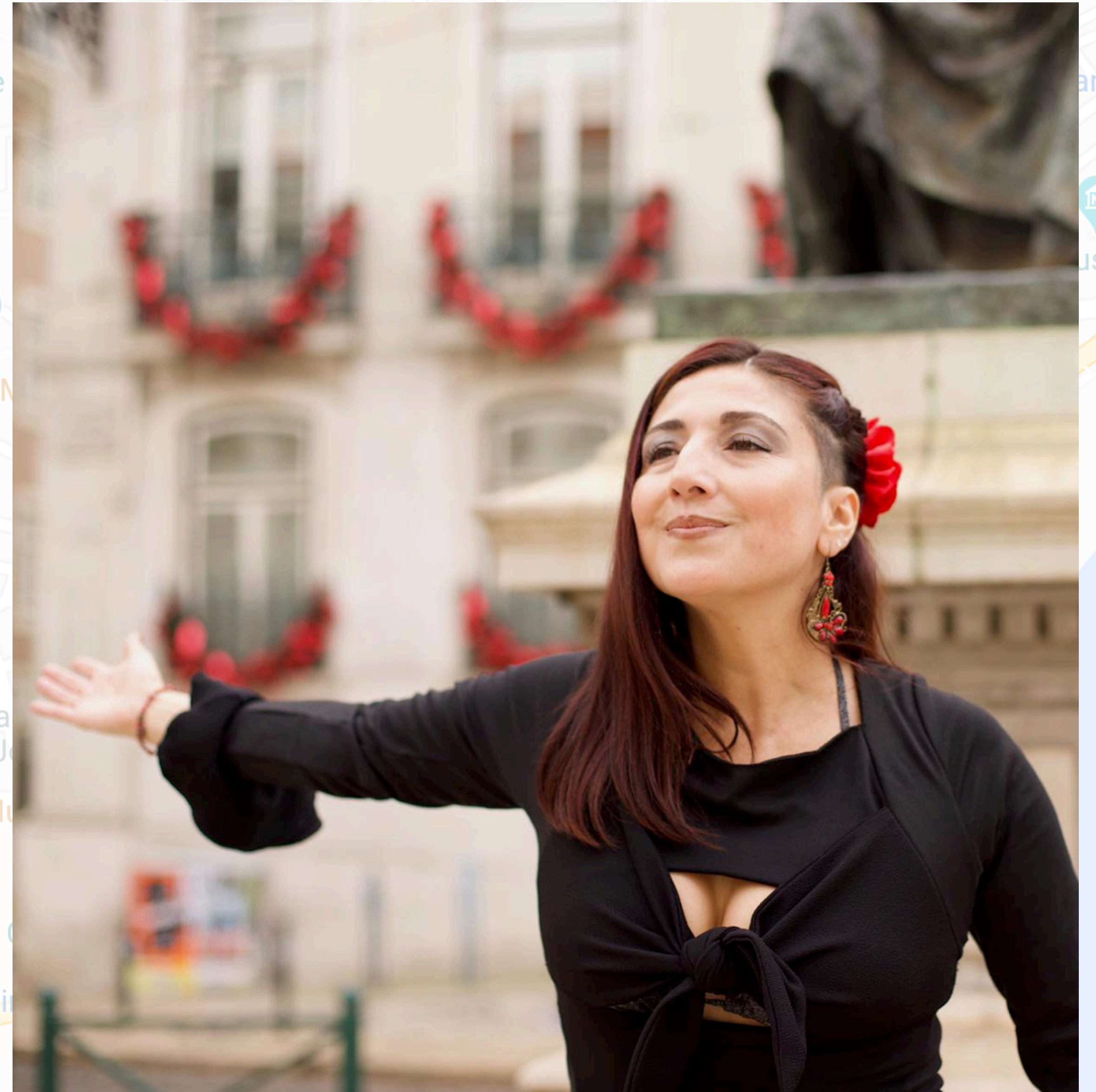
by Uli @ Ironhack | Nov 20th 2020

Return on Street Performance in Lisbon

Sample Data

50 observations (2 outliers)

- 6 groups (time slots of 20 min each)
- 2 locations [Baixa-Chiado, Praça do Comércio]
- Genders [Male, Female, Couples]
- Individuals [True/False]
- Age Group [25-49, 50+]
- Songs [4 out of 5 songs]
- Return in EUR



Old individual men donate more

Student's t-test (independent two-samples)

$H_0: \text{Return}[\text{'men' \& 'ind' \& '50+'}] \leq \text{Return}[\sim[\text{'men' \& 'ind' \& '50+'}]]$

```
ttest_ind(old_ind_men, not_old_ind_men, equal_var=False)
```

Test value: -1.425, p-value = 0.084

H_0 not rejected!

Conclusion:

['men' \& 'ind' \& '50+'] are not more generous!

(actual sample mean: 0.14 EUR 🙄)

w/o outliers:

Test value: -0.841, p-value: 0.207



Gender 'Study'

Chi-square test of independence

H_0 : Gender does not matter if person donates (value independent).

Obs	Donation	No Donation	Total
Male	4	25	29
Female	6	9	15
Couple	0	6	6
Total	10	40	50



H_0	Donation	No Donation	Total
Male	5.8	23.2	29
Female	3	12	15
Couple	1.2	4.8	6
Total	10	40	50

P-value: **0.051** → close enough to reject → **gender does matter!**

Gender 'Study'

Chi-square test of independence (w/o outliers)

H_0 : Gender does not matter if person donates (value independent).

Obs	Donation	No Donation	Total
Male	4	25	29
Female	4	9	13
Couple	0	6	6
Total	8	40	48

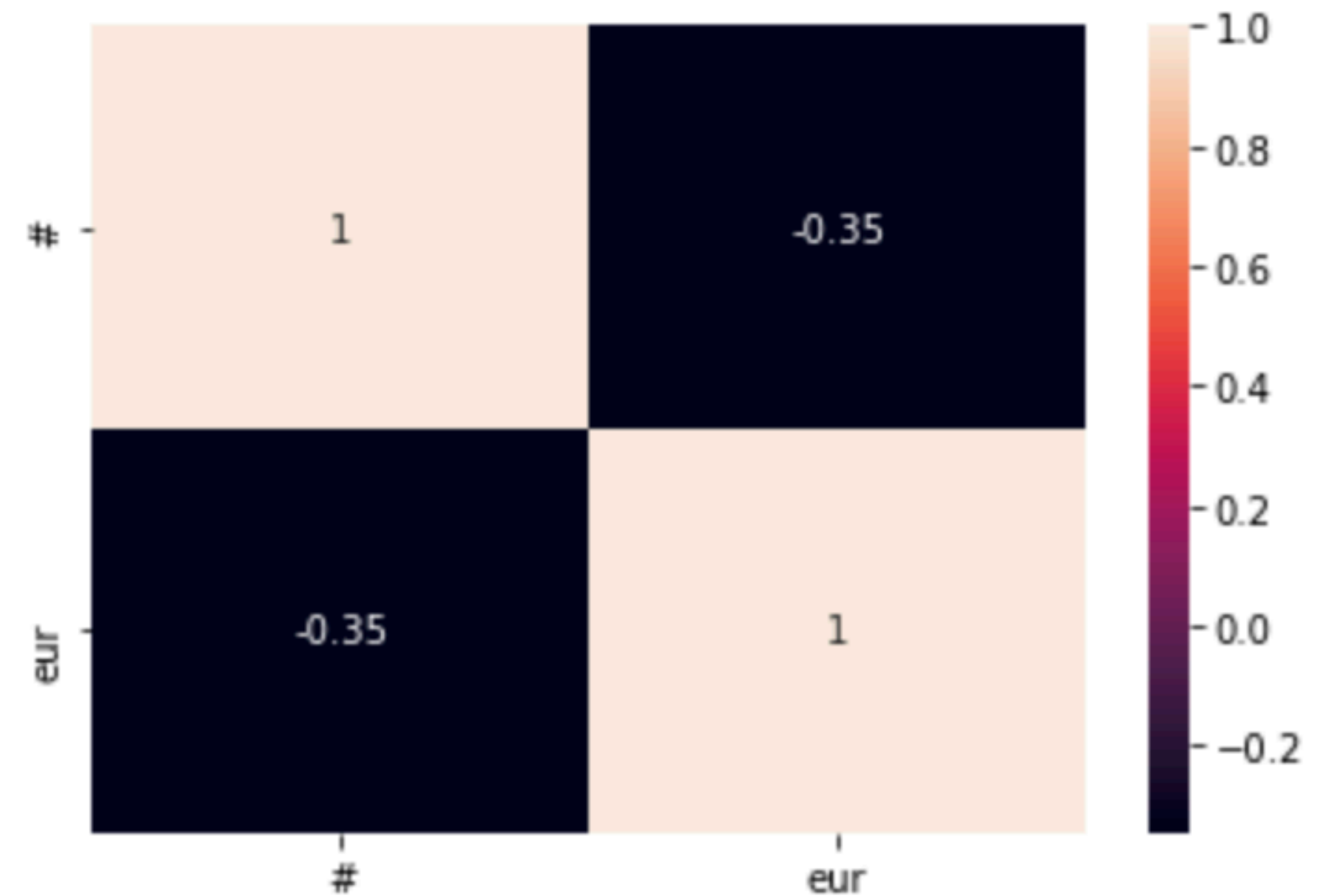
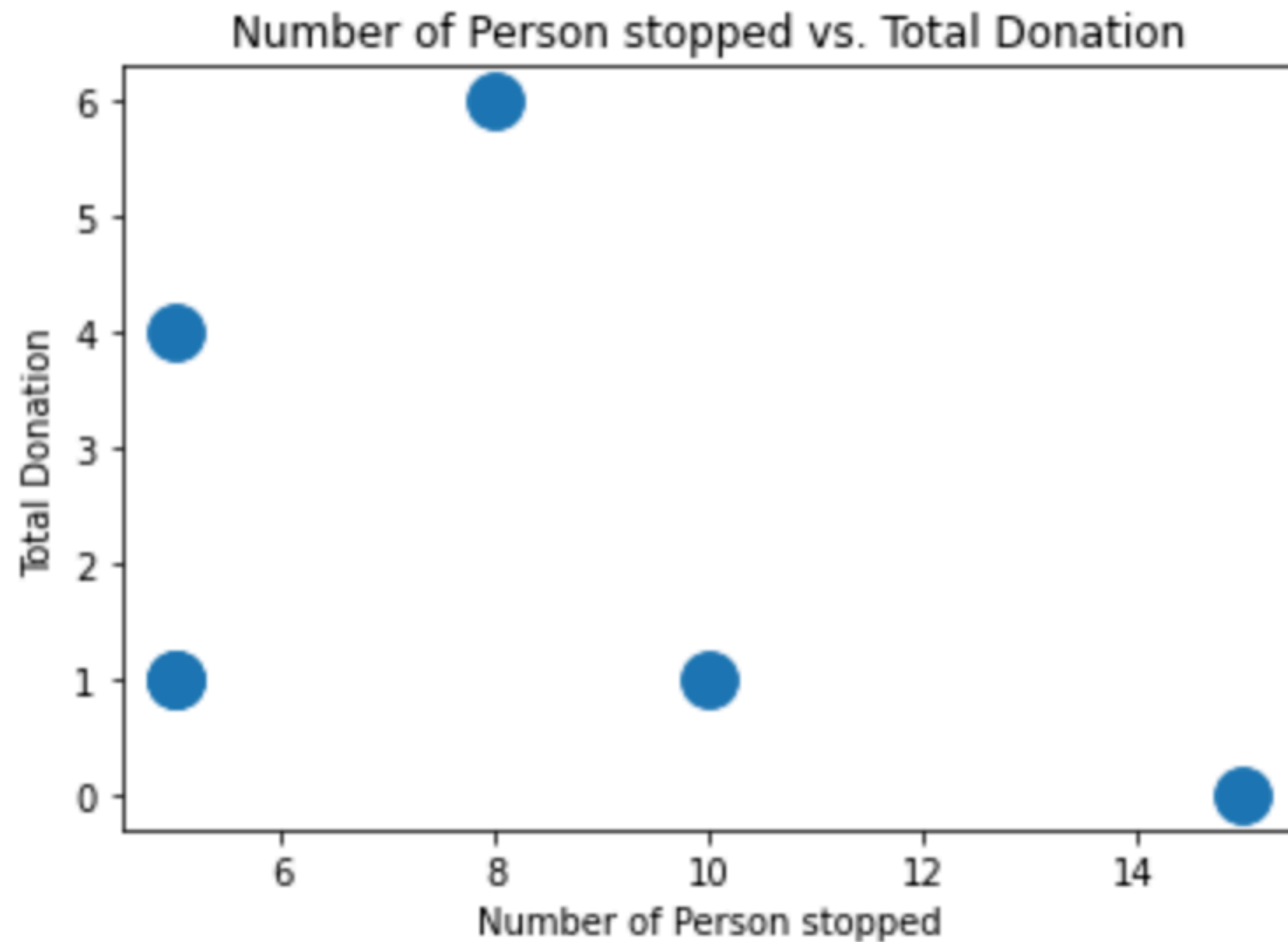


H_0	Donation	No Donation	Total
Male	4.83	24.17	29
Female	2.17	10.83	13
Couple	1	5	6
Total	8	40	48

P-value: **0.198** → H_0 not rejected → **gender does not matter!**

Number of stops has positive effect on return

Scatter Plot & Correlation



Negative correlation!

Location?

Student's t-test (independent two-samples)

$H_0: \text{Return}[\text{'Praça do Comércio'}] \leq \text{Return}[\text{'Baixa-Chiado'}]$

```
ttest_ind(return_pdc, return_bc, equal_var=False)  
Test value: 2.761, p-value = 0.006
```

H_0 rejected!

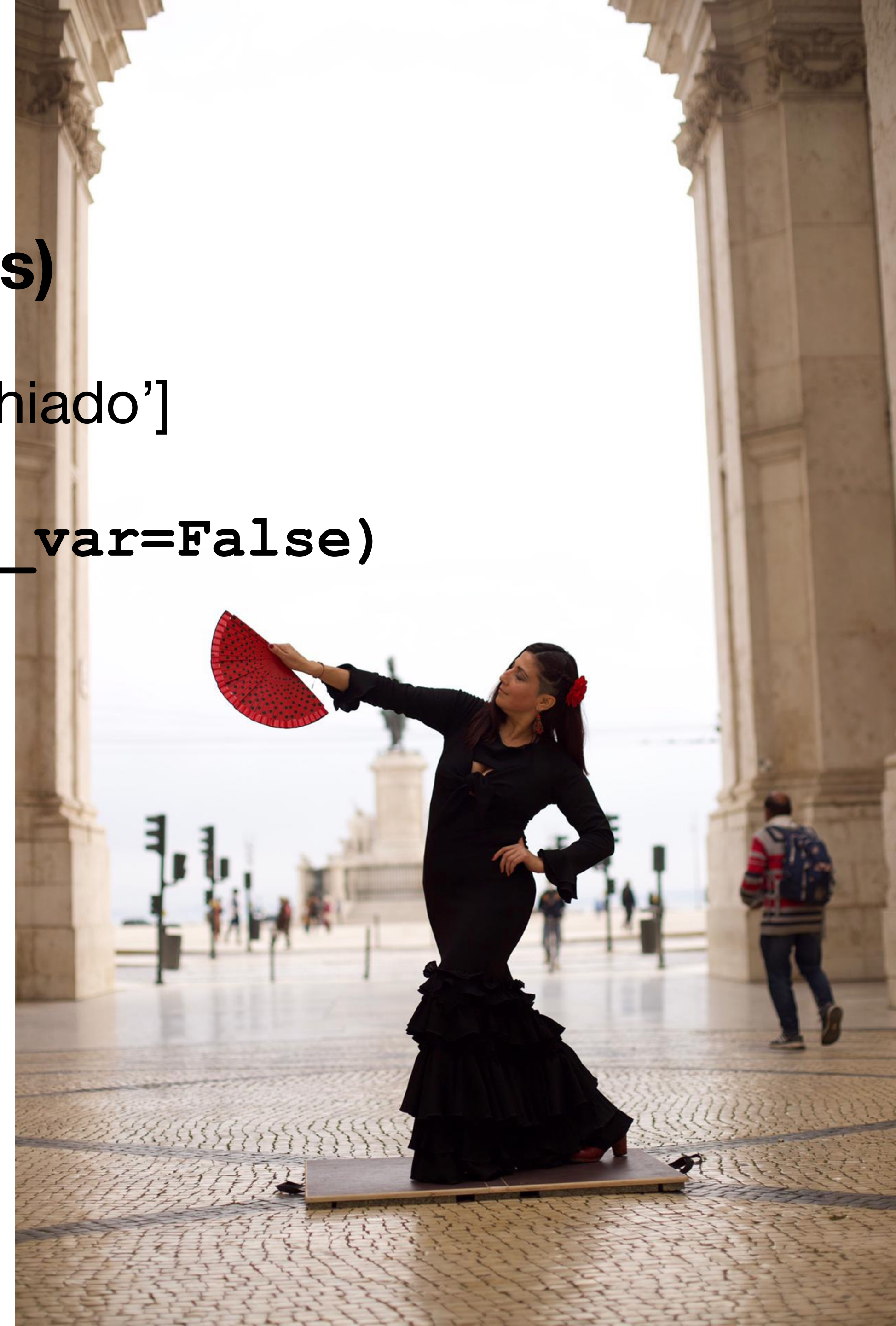
Conclusion:

Praça do Comércio better than Baixa-Chiado!

(actual sample mean: 0.61 EUR/obs. vs. 0.07 EUR/obs.)

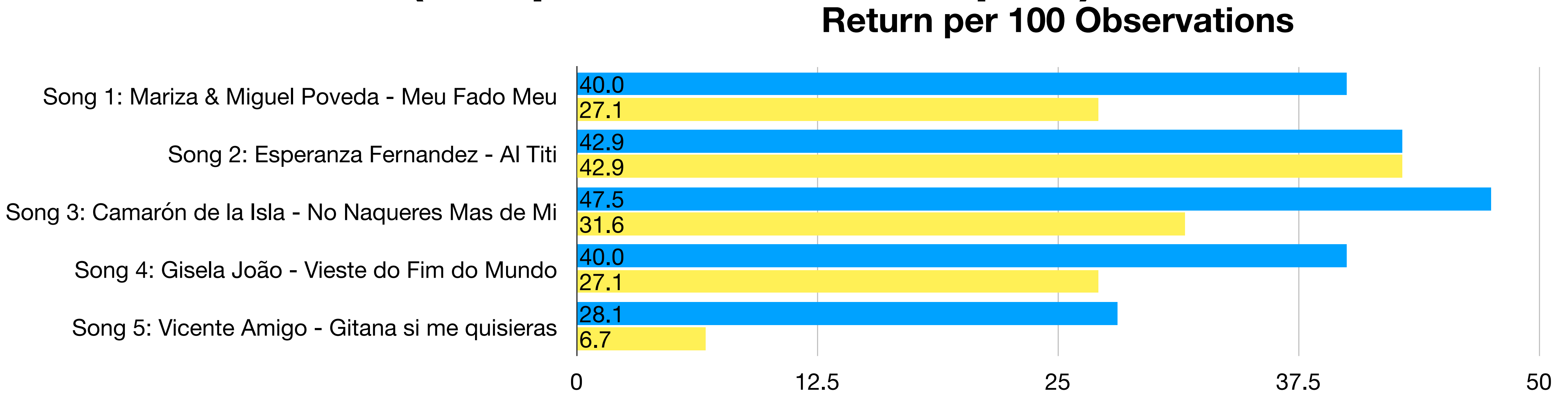
w/o outliers:

Test value: 2.464, p-value: 0.012



Songs driving returns

Student's t-test (independent two-samples)



P-values	1	2	3	4	5
1	1.00	0.40	0.38	1.00	0.03
2		1.00	0.28	0.40	0.01
3			1.00	0.38	0.02
4				1.00	0.03
5					1.00

Conclusion: Song 5 su*ks?

Conclusions

Recommendations for Plan B



**location matters | gender doesn't
quantity neither | choose songs wisely**

A woman with long dark hair, wearing a black long-sleeved dress with multiple ruffles at the bottom, is performing on a city street. She is standing next to a large, ornate stone pedestal that holds a bronze statue of a seated figure. The background shows a European-style street with buildings, a traffic light, and a shop. The scene is decorated with red garlands. The text '¡Gracias!' is overlaid on the image.

¡Gracias!

Street artist: [@nefertitisgrv](#)
Pictures: [@odt](#) [g](#) [ribot](#) [photos](#)