DATA VISUALISATION PROJECT

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INTRODUCTION

The dataset contains information about 17 major international **events of figure skating**, from October 2016 to December 2017.

Dataset source: https://github.com/BuzzFeedNews/2018-02-figure-skating-analysis

HOW DOES AN EVENT WORK?

In each event, 8 **categories** compete: Ladies, Men, Ice dance, Pairs and their respective junior groups.

The competion has the same structure all over the categories. Each one is composed by 2 **programs**: **short** and **free**.

Athlete(s) final score = short program score+ free program score

HOW TO CALCULATE THE SCORES?

In each performance two types of aspects are judged: **elements** (i.e. jumps and spins) and **components** (i.e. interpretation of the music and skating skills).

Performance score = elements score + components score

Element’s score = element’s base value + judge’s score

judge’s score ∈ [-3, +3]

Component’s score = factor * judge’s score

judge’s score ∈ [0.25, 10]

DATASET

Some of the main information considered after preprocessing are:

- event
- category
- program
- athlete_name
- athlete_nation
- element_base_value
- total_element_score
- total_component_score
- judge_nation
- rank
- ...

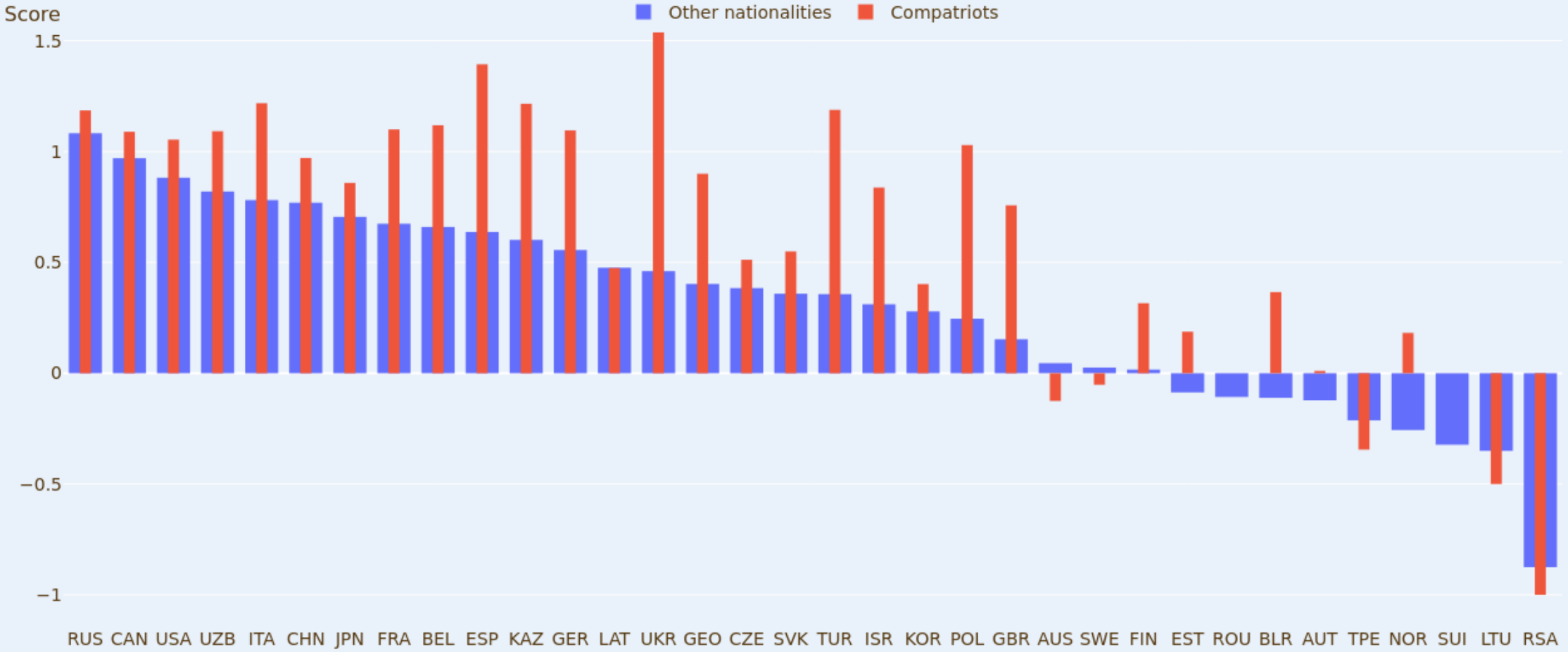
You can find the processed dataset and code here.

QUESTIONS ADDRESSED

- Do the judges favor compatriot athletes?
- Which athletes present the most difficult elements and how are they ranked?
- Are elements more important than components in establishing the final ranking?

Do the judges support compatriot athletes?

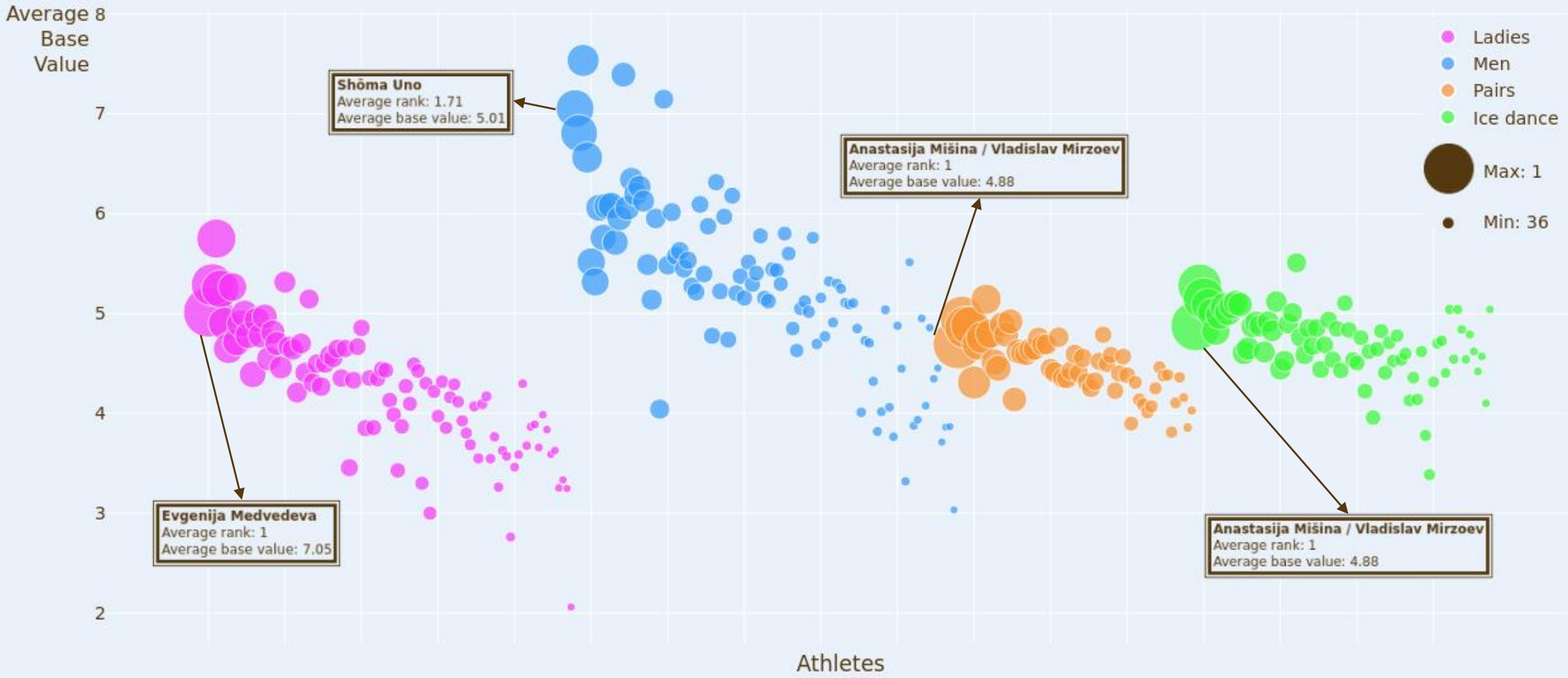
Comparison between the average score given to a Nation's athletes by their compatriots and the one given by other judges



data source: https://github.com/BuzzFeedNews/2018-02-figure-skating-analysis
plot author: Cecilia Zagni

Which athletes present the most difficult elements and how are they ranked?

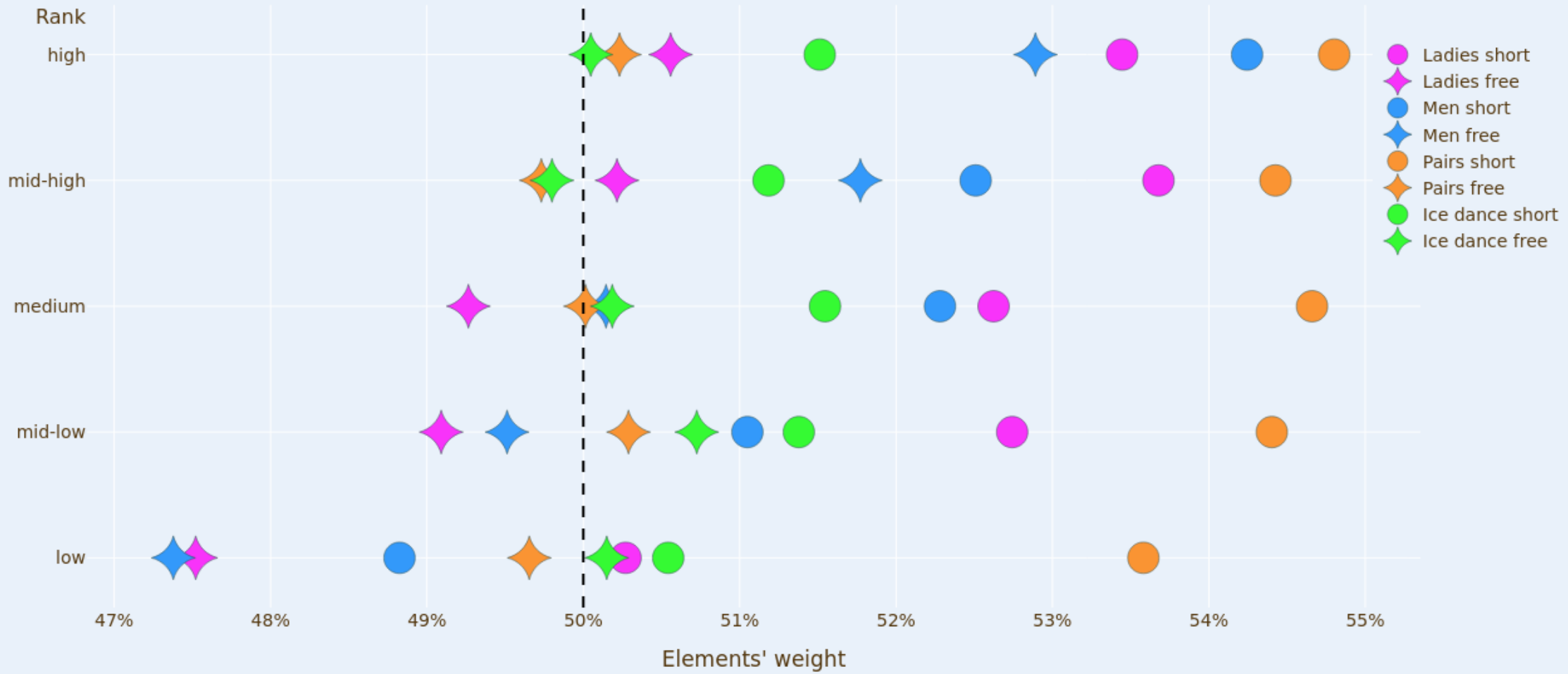
Each athlete is represented by a bubble. The athletes are categorized and ordered by average rank descending from left to right, the rank is also represented by the dimension of the bubble



data source: https://github.com/BuzzFeedNews/2018-02-figure-skating-analysis
plot author: Cecilia Zagni

Are elements more important than components in establishing the final ranking?

The performances in each event have been divided by rank level (low-high).
For each rank level and type of program, the average weight of the elements in the final score is shown on the x-axis.



data source: https://github.com/BuzzFeedNews/2018-02-figure-skating-analysis
plot author: Valeria Insogna

INDIVIDUAL CONTRIBUTIONS

- Dataset preprocessing: Zagni.
- Question brainstorming: Insogna, Zagni.
- Question one data analysis and visualitazion: Zagni.
- Question two data analysis and visualitazion: Insogna.
- Question three data analysis : Insogna.
- Question three visualitazion: Zagni.
- Slides and refinements: Insogna, Zagni.

REFERENCES

- https://github.com/BuzzFeedNews/2018-02-figure-skating-analysis
- https://en.wikipedia.org/wiki/ISU_Judging_System#:~:text=The%20seven%20elements%20required%20of,spiral%2C%20and%20one%20step%20sequence.
- https://www.usfigureskating.org/about/scoring-system
- https://www.isu.org/figure-skating/rules/fsk-judging-system

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Background image:

https://www.freepik.com/premium-photo/texture-blue-ice-surface-with-skate-scratches_5258233.htm (see premium license here).