#### Questions to be answered

- 1. What universities/countries/regions/continents are the most consistent through the years, and which regions are least consistent? For this we can consider both the rankings and the scores.
- 2. Are there any noteworthy differences/anomalies in the top 200 universities of the world? Find and analyze the ones you consider most interesting.
- 3. What are the patterns you discovered that you suspect could be interesting? Does the data contain any unusual patterns through the years that you did not expect? Although incomplete you could also use more data of the years before 2016.
- 4. Are there any noteworthy differences/anomalies in the top 800 universities of the world?

#### Answers:

1.

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Continent	mean	Std
Europe	351	6
America	198	1
Asia	197	6
Oceania	41	2
Africa	12	1

The continents with the most variance or deviation are Europe and Asia. The continents with the least variance or deviation are America and Africa.

## **Europe:**

In Europe, Eastern Europe and Northern Europe had the most deviation and have both grown in the amount of universities they have in their regions.

### Asia:

In Asia, Eastern Asia and Southern Asia have the most variance or deviation. Both have grown in the amount of universities they have in their regions. In Asia all regions grew in their amount of universities in the ranking

#### America:

In America the region with the most growth in their universities in the ranking is South America, going from 26 to 55 in 3 years.

# Africa:

In Africa the region with the most growth in their universities in the ranking is Northern Africa, growing from 4 to 15 in 3 years.

2.

- a. There are a lot of international or English universities around the world where the international student percentage is much higher than the other universities. The percentage of international students is also a lot higher at universities that are located near borders.
- b. The percentage of males start at 52 and at the end of the top 200 it has decreased by 4% down to 48. The Washington University in St Louis had a 100:0 male to female ratio in 2016, which we find weird due to this statement on their site in 2018: "Washington University in St. Louis continues to enroll fairly equal numbers of women and men. These percentages hold true for both undergraduate and graduate student populations.". We think the ratio in 2016 is a mistake.

# 3. No answers yet

4.

a. The Anadolu University in Turkey had more than 1.4 million students in 2018 but just two years prior it had less than 400 thousands, the average around the world less than 30 thousand. The Anadolu University uses a system called "The Open Education System" via this system students can get degrees while not physically going to the university. We think the big difference in students between 2016 and 2018 is because in 2016 the online students were not counted in the amount of students.

# **Applied regression techniques:**

