University ranks

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Objective

Analysis, visualisation and interpretation of data concerning university rankings.

Workflow

1. **Problem Definition** (Workplan)
2. **Data acquisition and loading**
3. **Data Exploration**
4. **Data Modelling**

Problem Definition

- How do university rankings change over time?
- Which characteristics of universities contribute most to good rankings, or to large changes in the ranking position?
- How do these characteristics correlate with characteristics of cities or countries in which the university is located?
- Are there predictors for increases or decreases in the rankings?

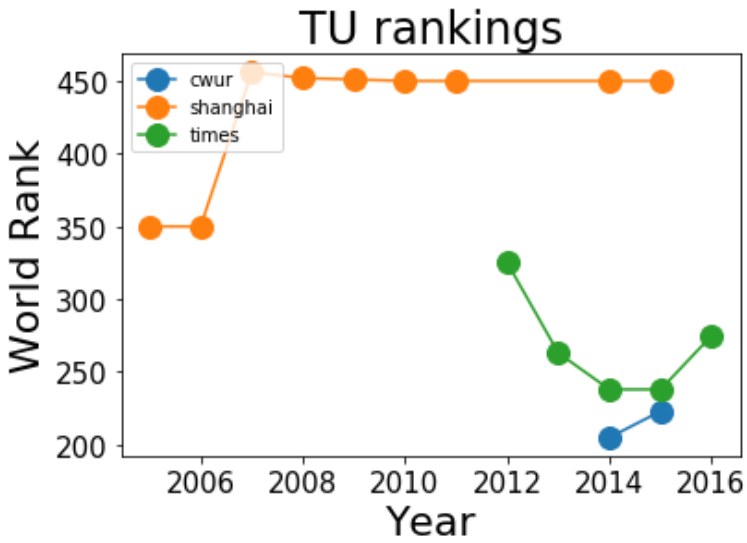
Data acquisition and loading

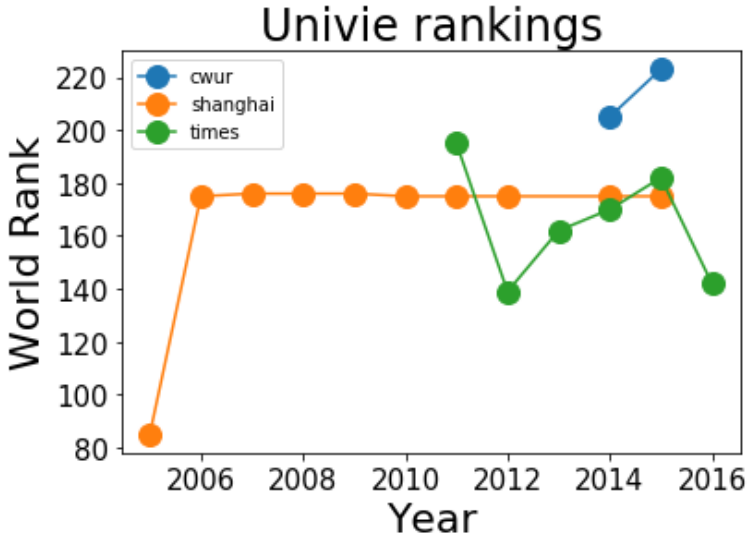
- **Center for World University Rankings** (CWUR) → Main data source
- **Academic Ranking of World Ranking Universities** → by ShanghaiRanking, contains rankings from 2005
- **World University Rankings** → by Times Higher Education, contains inherent characterstics of universities such as number of students, ratio, ...
- **Public Expenditure** → by National Center of for Education Statistics, for correlation with characteristics of country

Data acquisition and loading

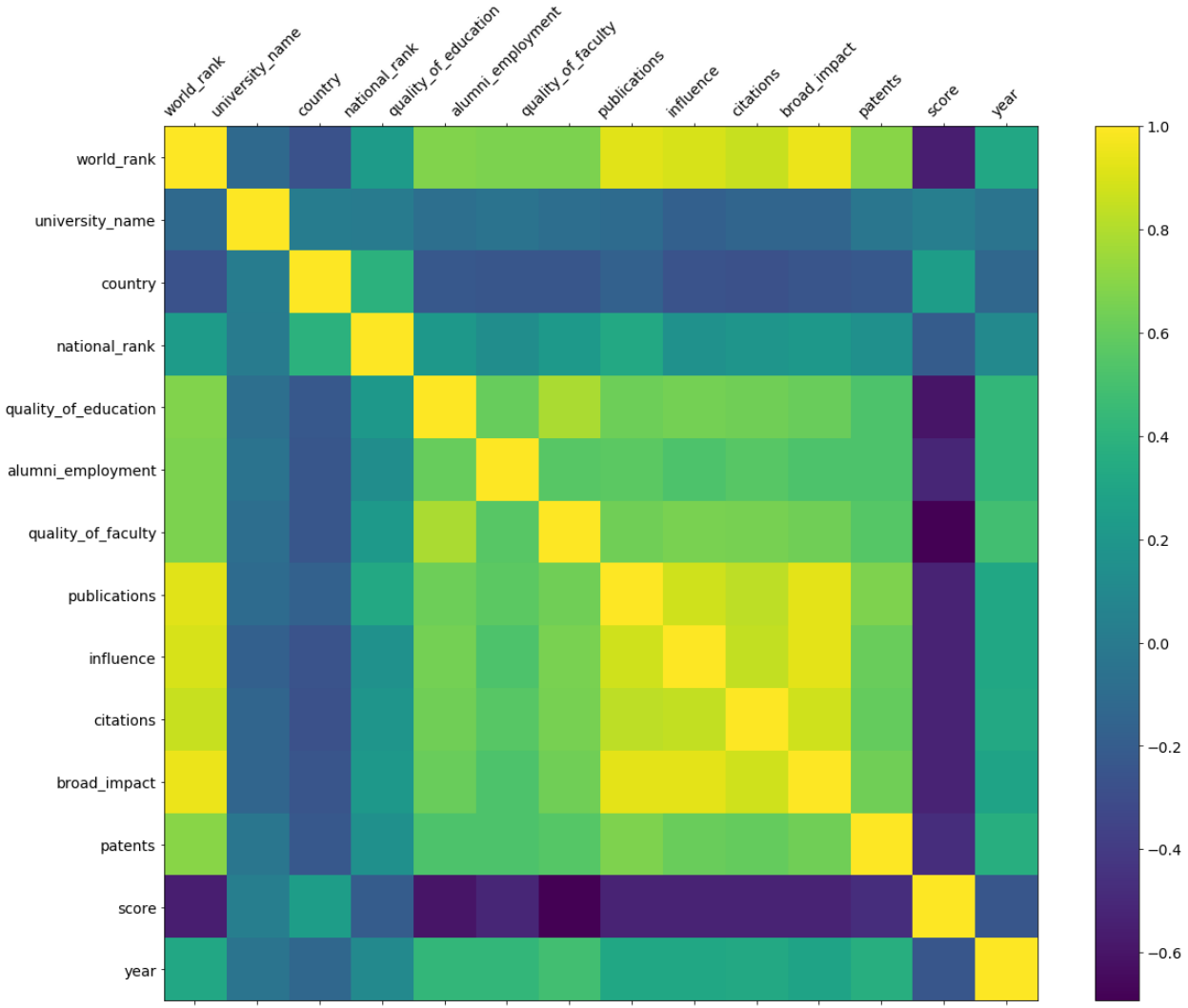
- **Human Development Index** → by United Nations Development Programme, for correlation with HDI
- **Countries By Region** → by US Government, for data analysis of rankings by region
- **Corruption Perception Index** → by Transparency International, for correlation with corruption

Data Exploration - Univie vs TU Vienna

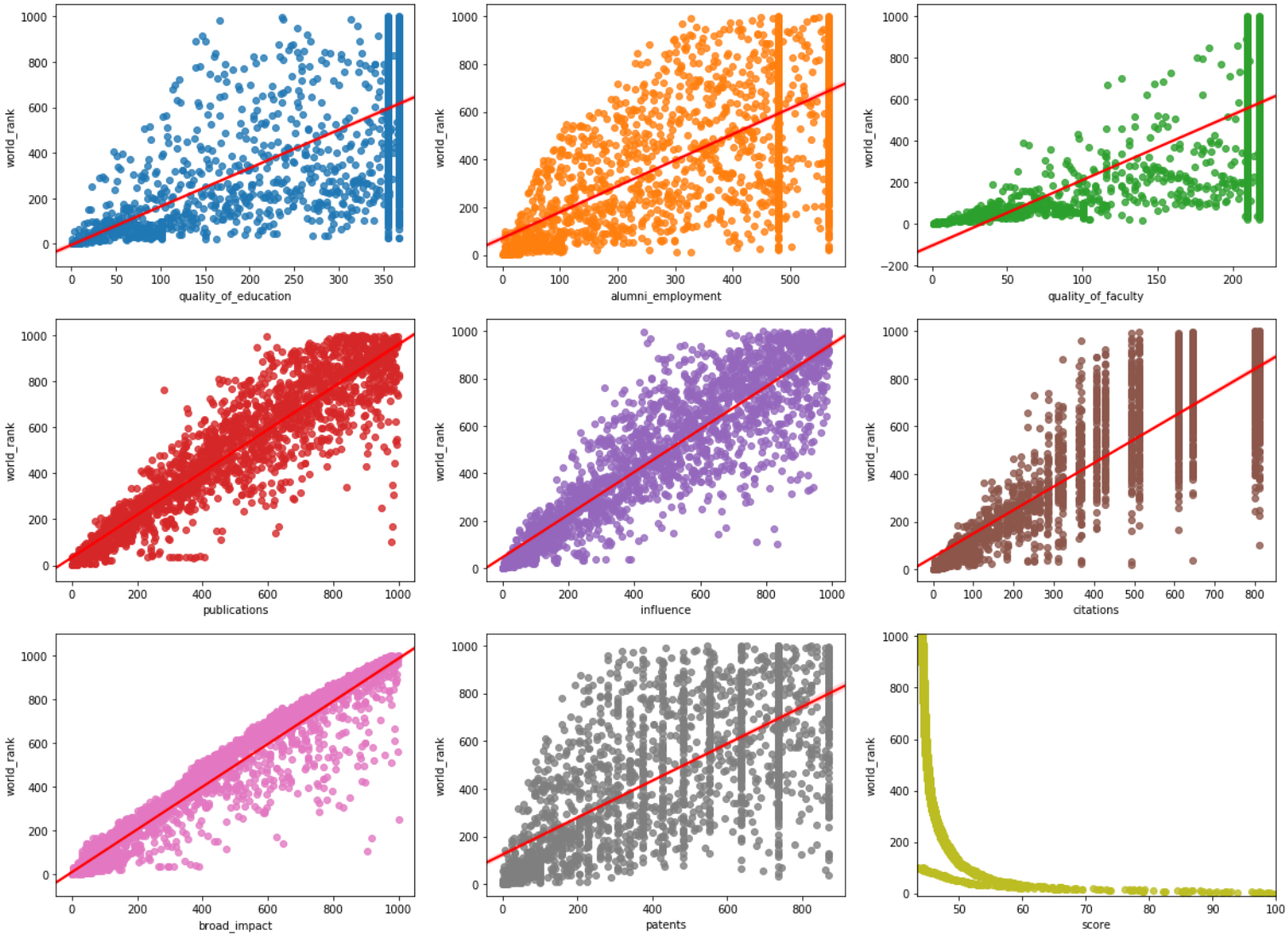




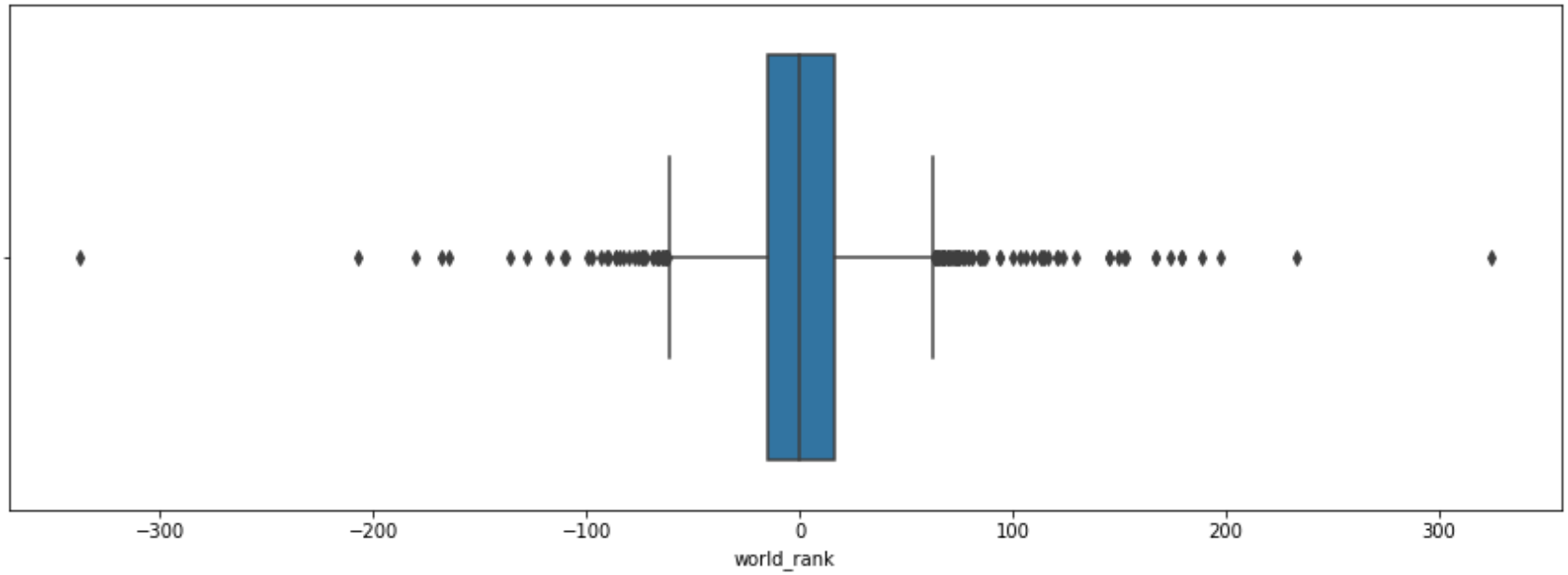
Data exploration - Heatmap for overview



Data exploration - World rank vs other characteristics



Data exploration - Ranking deviation over years (2012-2015)



Some results

Hypothesis: ...
[Graph]
Conclusion–: ...

Conclusion

- ...