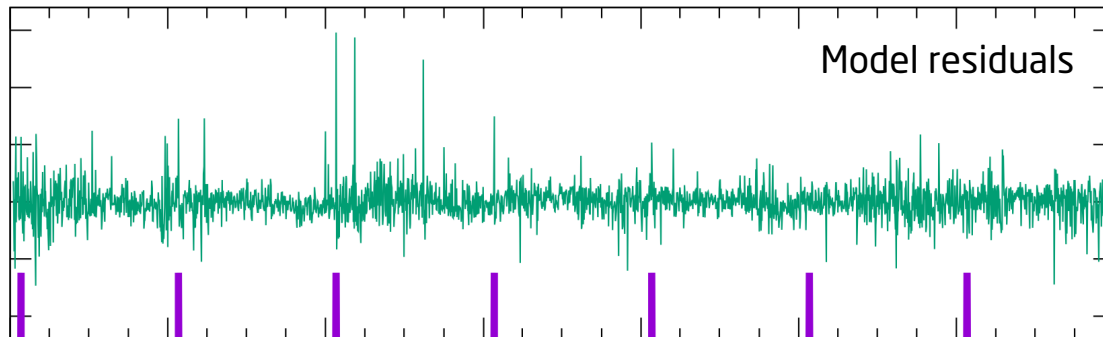
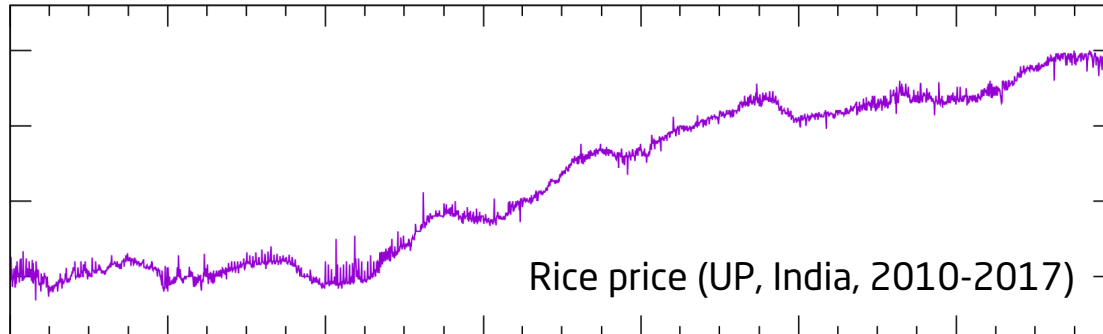


Mining event impacts on time series

How can we measure the statistical association between events and time series?



Republic Day series

Math

formalize problem with a suitable objective function

Algorithms

develop an algorithm to optimize the objective function

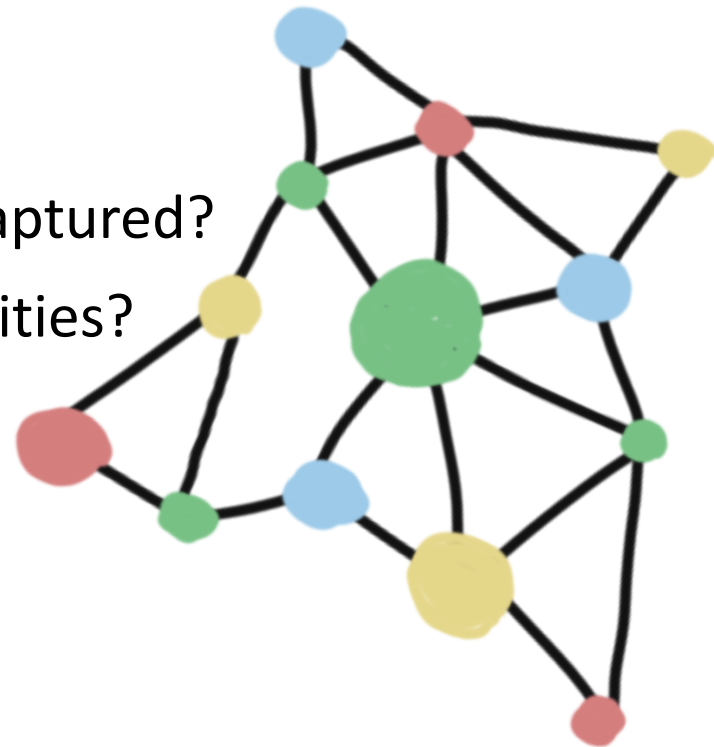
Empirical methods

evaluate the algorithm with suitable experiments

Interested? erik.scharwaechter@hpi.de

Community exploration in the wild

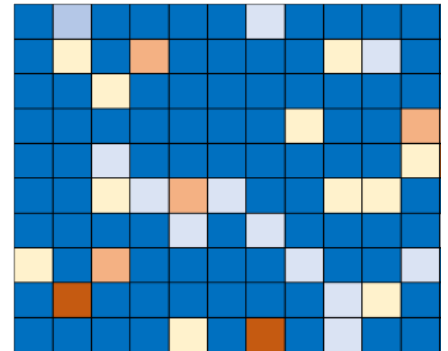
- So far, you learned about **structural** communities
- We have massive data about **real-world** communities
- How do these two coincide?
- What are the properties that are not captured?
- Is there life beyond structural communities?



Interested? anton.tsitsulin@hpi.de

Missing-value invariant data mining

- **Challenge:** data with no prior imputation is hard to process by traditional data mining algorithms
- **Problem:** imputation does not add any information to the data, but endangers adding a bias
- **Solution:** Create/adapt algorithm such that they are invariant due to missing values
- **Working on:**
 - Weighted unsupervised random forest (learning similarities)
 - (Starting) Feature selection with missing values
 - (Potentially) Any data mining algorithm



Interested? thomas.goerttler@hpi.de