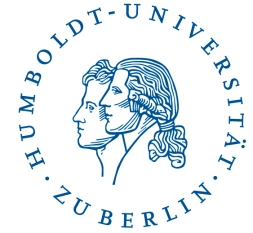


Introduction to Data Science & Visualizations in Learning Analytics

Jakub Kuzilek

Data Science in Learning Analytics



Data Science is discipline that allows you to turn raw data into understanding, insight, and knowledge.

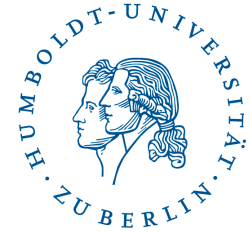
[Grolemund, G., & Wickham, H. \(2017\). R for Data Science. O'Reilly Media.](#)

DS in education is challenging

Making sense from data about teaching, learning and educational systems.

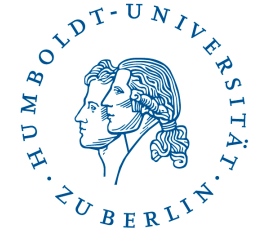
Data analysis + content knowledge

Tasks



- Building systems that get data to the right people
- Measuring impact on the student experience
- Searching for patterns in student data
- Using statistical models in education
- Studying the effects of educational support
- Advancing scientific knowledge about learning and learners

Common methods



- Prediction
- Clustering
- Behaviour modelling
- Recommendation
- Student grouping
- Social network analysis
- Text mining