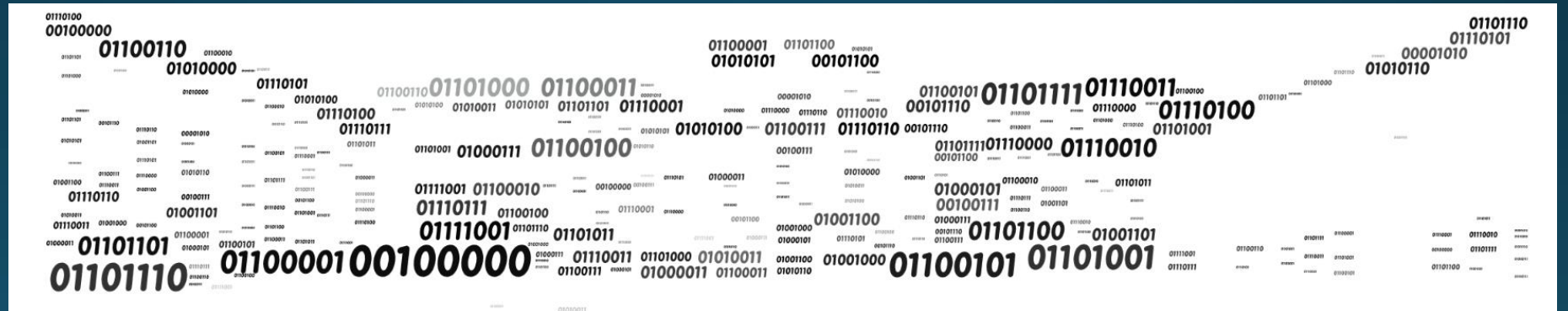


Survey and Data Science



Prof. Dr. Frauke Kreuter

Survey and Data Science



Prof. Dr. Frauke Kreuter

Was hat sich geändert?

Datenquellen bisher

Administrative Prozesse



201300303201

2

3 **Steuernummer** [redacted]

eTIN lt. Lohnsteuerbescheinigung(en), sofern vorhanden [redacted] eTIN lt. weiterer Lohnsteuerbeschei [redacted]

4

Einkünfte aus nichtselbständiger Arbeit

Angaben zum Arbeitslohn Lohnsteuerbescheinigung(en) Steuerklasse 1 - 5

5 **Steuerklasse** 168 [redacted]
EUR Ct

6 Bruttoarbeitslohn 110 [redacted]

7 Lohnsteuer 140 [redacted]

8 Solidaritätszuschlag 150 [redacted]

Befragungen



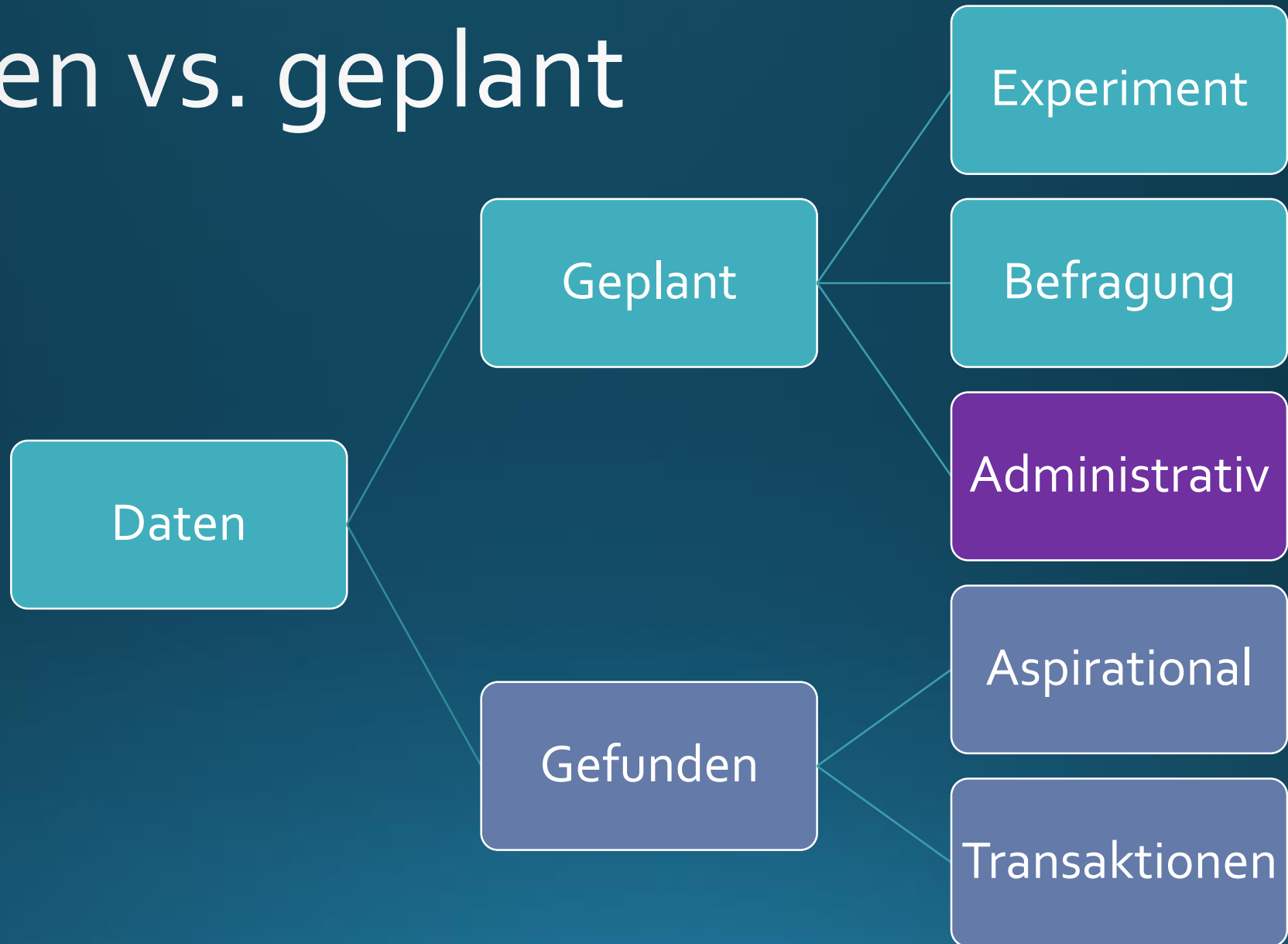
Drei Paradigmenwechsel

D Digital erhoben

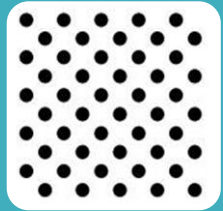
A Allen verfügbar

S Selbst entstanden

Gefunden vs. geplant

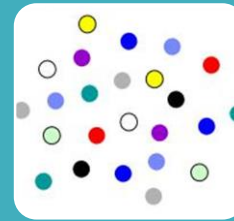


Eigenschaften der neuen Daten



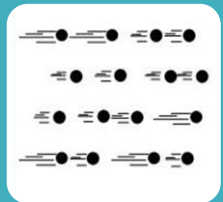
“Volume”

- Große Mengen
- Groß ist relativ



“Variety”

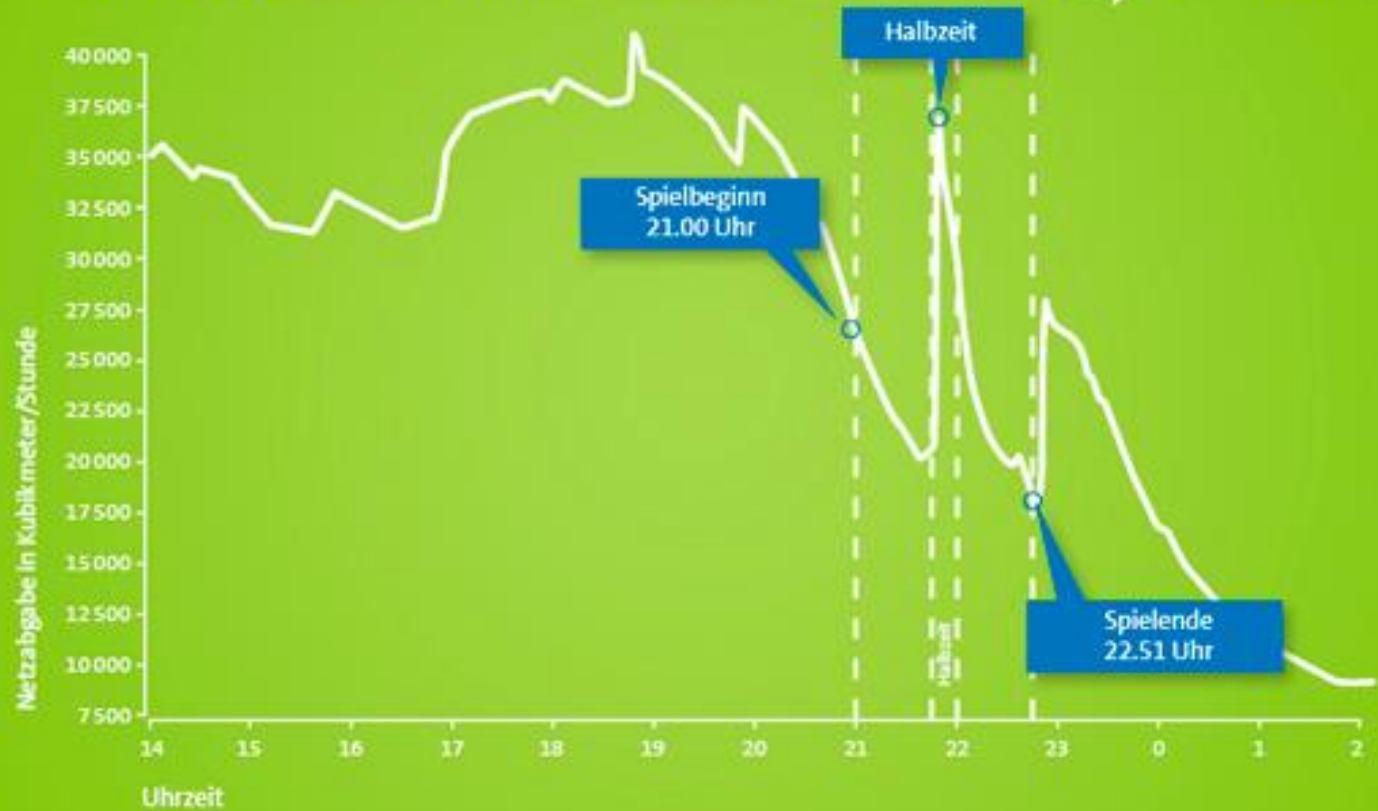
- Vielzahl an Formen
- Text, Audio, Bilder



“Velocity”

- Daten in Bewegung
- Ständige Updates

Netzabgabe für den 12. Juni 2016

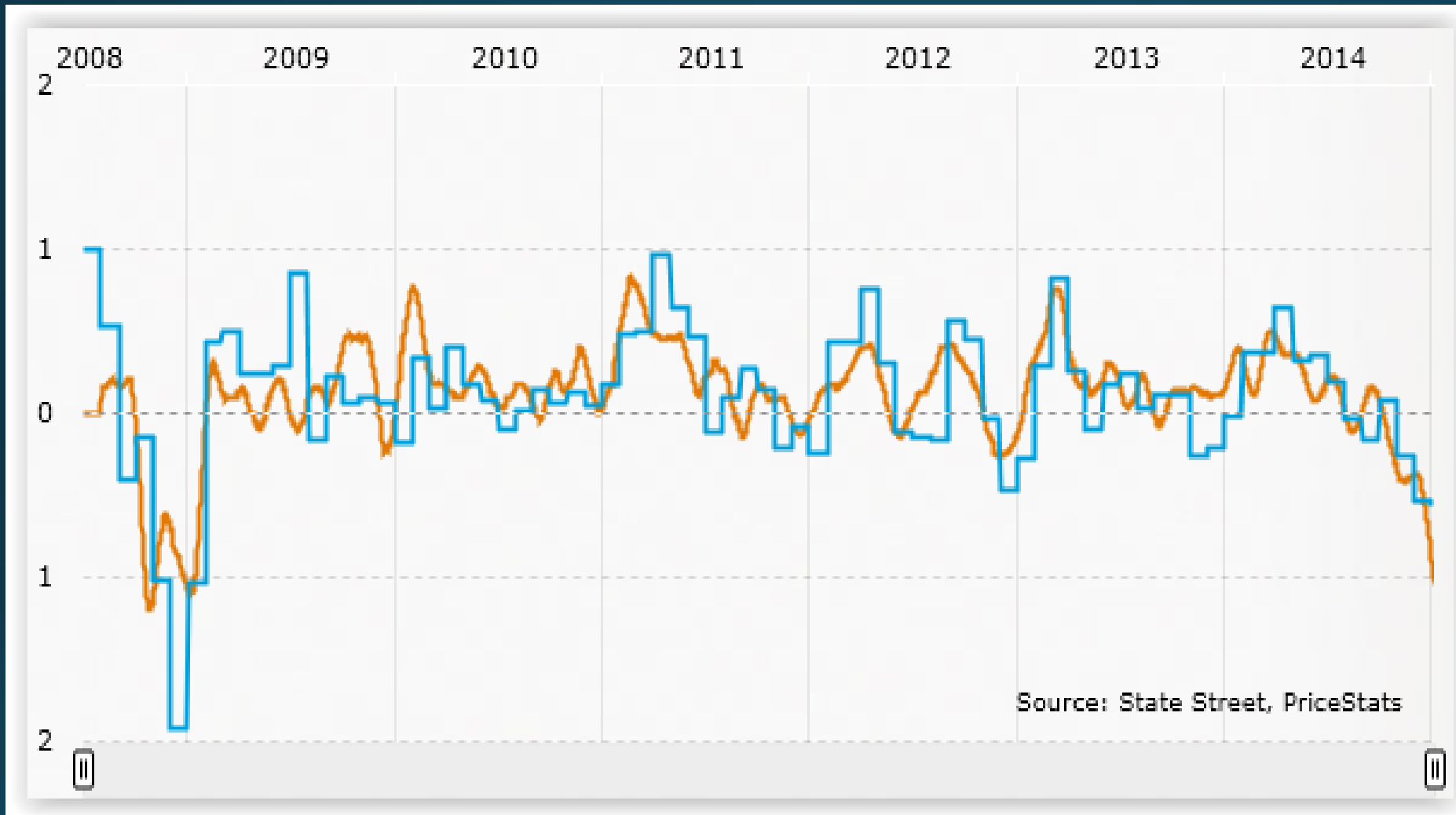


Beispiel Wasser

Volume
Netzabgabe
Kubikmeter pro
Stunde

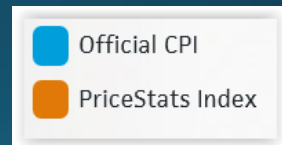
Velocity
Kontinuierliche
Messung

Variety
Vielzahl an Formen
(Abwasser)



USA
Aggregierte
Inflationsraten
(monatlich)

PriceStats
Index und
Daten des
Bureau of
Labor Statistics



Hoffnung:

Digitalisierung ersetzt teure Datenerhebung,
bietet mehr (bessere) Daten als Entscheidungsgrundlage und
erlaubt Zugriff auf Informationen in Echtzeit

Was sollte man können?

**Datenzugang/
Info-Weitergabe**

Datenanalyse

**Datenaufbereitung/
Speichern**

**Daten generierender
Prozess**

Fragestellung



Visualisierung, Kommunikation, Datenschutz

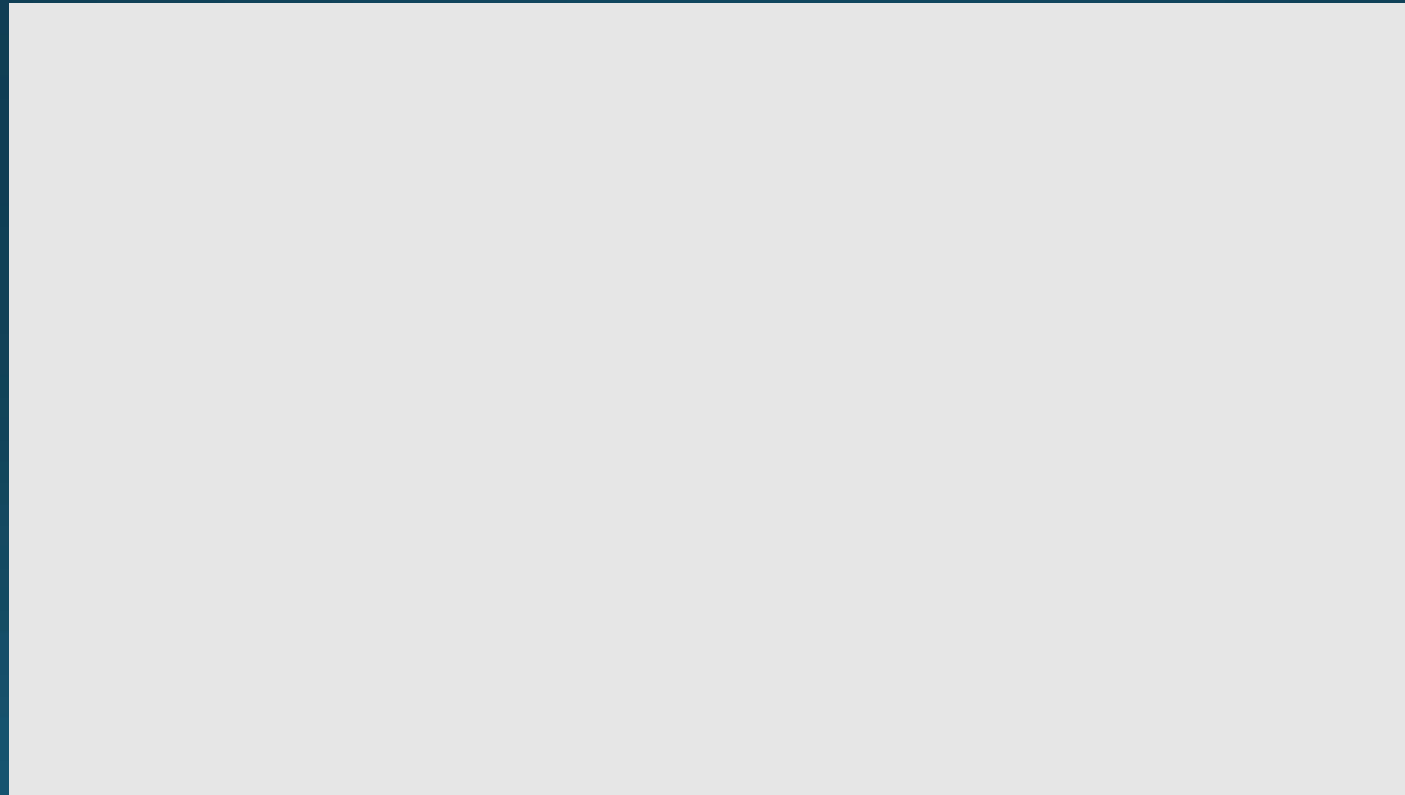
Machine Learning, Regression, Inferenz

Datenbank Management, Record Linkage etc.

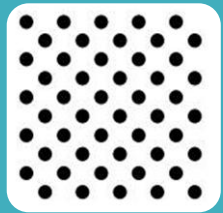
Erhebungen, Scraping, Linkage, Monitoring

Beschreiben, Verstehen, Erklären

Beispiel: Daten generierender Prozess

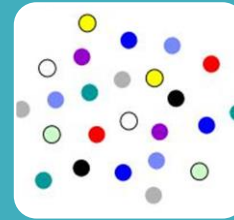


Die vierte Eigenschaft!



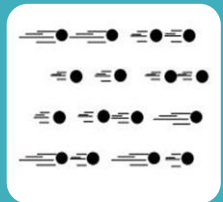
Volumen

- Große Mengen
- Groß ist relativ



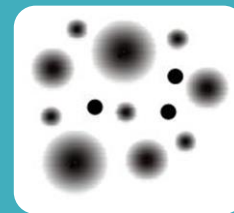
Variety

- Vielzahl an Formen
- Text, Audio, Bilder



Velocity

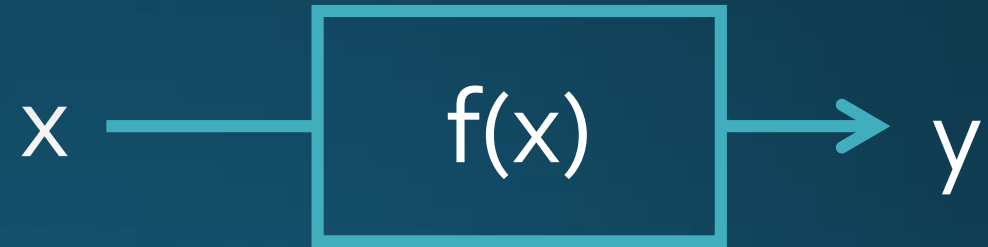
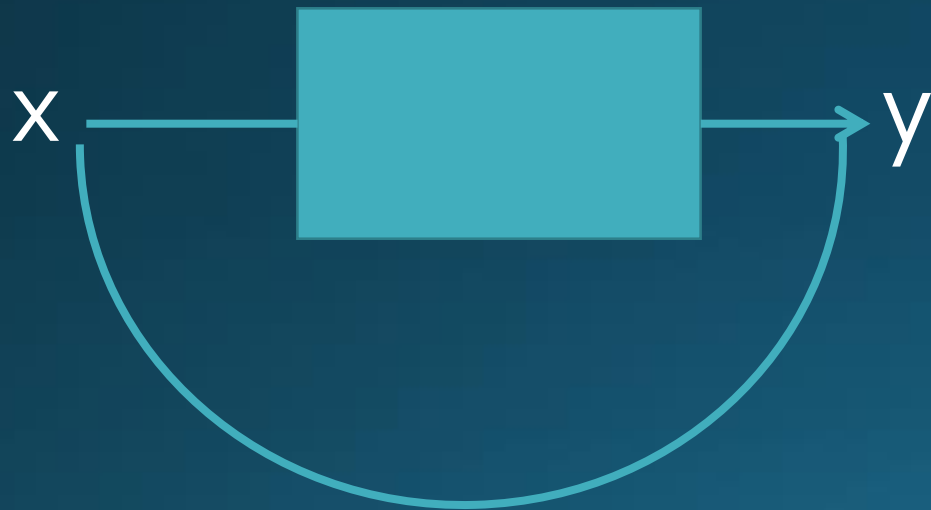
- Daten in Bewegung
- Ständige Updates



Veracity

- Fehlerhafte oder
- Fehlende Daten

Fragestellung: Vorhersage vs. Verstehen?



Wo findet man Arbeit?



infas



Expertise im Team

Inhaltliche
Expertise

Statistik



Informatik


System
Administration

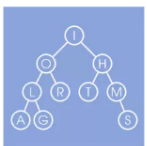
Angebote


Berufsbegleitende Weiterbildung


- Arts and Humanities
- Business
- Computer Science
- Data Science
- Life Sciences
- Math and Logic
- Personal Development
- Physical Science and Engineering
- Social Sciences
- Language Learning


Data Analysis


 **Data**
10-co

 **Data**
6-cou
Univer


 **Exce**
5-cou

 **Statis**
5-cou

 **Busir**
5-cou



- Home
- Program ▾
- Project ▾
- Contact
- FAQs
- Imprint
- Search
- APPLY NOW**



INTERNATIONAL PROGRAM IN SURVEY AND DATA SCIENCE

offered through the University of Mannheim and the Joint Program in Survey Methodology (Universities of Maryland and Michigan, Westat)

BE PART OF IT

● ○ ○

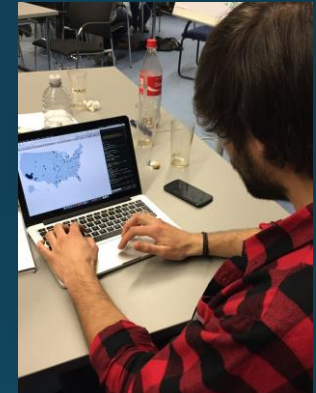
We are pleased to announce the launch of the International Program in Survey and Data Science (IPSDS). Fundamental changes in the nature of data, their availability, the way in which they are collected, integrated, and disseminated are a big challenge for all those working with designed data from surveys as well as organic data. IPSDS was developed in response to the increasing demand from researchers and practitioners for the appropriate methods and right tools to face these changes. We offer a multidisciplinary curriculum, world-class faculty, and a web-based learning environment that allows you to take courses from anywhere in the world.

Kooperation: Projekte und Praktika

The image shows a screenshot of the University of Mannheim website, specifically the Data and Web Science Group page. The page features a navigation menu with links for Home, People, News, Focus Areas, Teaching, Projects, Resources, Thesis, Career, and Contact. The main content area displays a news article titled "New Degree Program Mannheim Master in Data Science" dated 29.06.2016. The article text states: "The School of Business Informatics and Mathematics together with the School of Social Sciences start a new degree program *Mannheim Master in Data Science* in Spring 2017. The degree program equips students with solid theoretical foundations as well as the necessary practical skills to obtain operational insights from complex data sets." It further explains that the acquisition and utilization of large quantities of data influences all areas of daily life and that the University of Mannheim contributes to closing an education gap by offering this program. The article also mentions that the program teaches both fundamental and practical skills.

On the left side of the screenshot, there is a sidebar for "Elitenetzwerk Bayern" with a navigation menu including "Überblick", "Aktuelles", "Im Detail", "Elitestudiengänge nach Wissenschaftsbereichen", "Elitestudiengänge nach Studienorten", and "Bewerbung". Below this, there are logos for "DATA SCIENCE@LMU" and "STATISTICS + INFORMATICS".

Crowd Sourcing und Wettbewerbe



In Kürze

1. Digitalisierung ist eine Chance für datengestützte Entscheidungsfindung
2. Dazu müssen Daten nicht nur verarbeitet sondern auch verstanden werden
3. Gezielte Zusatzqualifikationen erweitern die Arbeitsmarktchancen

#dig#deep

<http://survey-data-science.net/>