Tasksheet

If someone changes anything within code or text documents please add a comment line like the following:

#fpeter3

Gruppe 1 Gruppe 2 Gruppe 3 (Data Prep)

Felix Marvin Tolga

Benny Julian Justin

Alexandre

Termine:

26.5 10:00 Data Prep done

23.6. 10:00 Code done (GIT-HUB)

1.7. 12:00 Report main body

7.7. 10:00 Report done

14.7. 12:00 Last Minute Changes

Aufgaben bis 19.5. für alle: (Tasks for everyone until 19.may)

* GitHub minimales Verständnis (damit wir unsere Ergebnisse ab nächster Woche darüber teilen können)
* Daten vom DWD passend herunterladen und Struktur verstehen
* Daten von NextBike herunterladen und Struktur verstehen
* Python Befehle zur Bereinigung von Datensets kennen (manchen wird auch eine Liste für den Anfang reichen 😉)
* In den Zweiergruppen erste Analyseansätze entwerfen (also Kombinationen für Diagramme und Referenzen, die nötig sind)
* Wer möchte Diagrammtypen heraussuchen mit viel Aussagekraft für unsere Daten und Relevanz von NULL-Werten für diese notieren.

Unsere Uni-Namen und Mail Adressen, sowie Matrikelnummer

Student IDs, Names and email Addresses are:

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Summary 19.5. :

Analysis guideline on github provided by Julius.

General Weather-data collection will be needed for our analysis. Therefore, we collect the following Datasets:

(please add every dataset you prepare Tolga)

NextBike Data already clean checked.

Everyone is on GitHub.

Tasks for everyone until 26.may:

* Build DataStructure following the Readme of Marvin
* Start reworking Workshops if necessary
* Get further ideas for analysis and targets
* Send Weatherdata with codes to Tolga (no later than 21.may)
* Download nextBike Data for Essen and Cologne
* Think about visualisations like the heatmap mentioned by one group…
  + Tolga prepares weatherdata in excel sheets as required
  + Marvin and Benny check generally the keydata to null values
  + Alexandre, Julian and Felix work on the time and date attribute equalization

Task 2

Alex

Julian

Justin

(Felix)

Todo: Start with mathematics behind weather data combination and transformation to KPI.

in the end possible visualization dashboard?

KPI-Vorschläge

* Revenue: hourly income per bike
* Weather Indikator: -1 to 1 **(compared to usage of bikes)**
* Pressure
* Humidity
* Percentage of used bikes (day/night difference /weekday or weekend)
* Availability of the bikes (coverage from task)
* Possibly: Time of usage before repairing (lifetime) by checking individual bike usage and unused times

Task 3

Benny

Tolga

Felix

Marvin

Data set split rates (50% 30% 20%??).

Regressions:

* Polynomial regression (Tolga / Felix)
  + Weather
  + Time
  + Percentage of used bikes (day/night difference /weekday or weekend)
* Radial basis function
* ANN (Benny / Marvin)

@Marvin and Felix will finalize the data transformation of our weather-data to datetime format. The complete header will be included in the Notebooks for each group!