KI DATA TOOLING
The Data Kit for Automotive AI

Enhancement of Basic Contexts for Coverage Analyses and Filtering

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Coverage Analysis and Filtering

With large amounts of data it is necessary to facilitate efficient searchability and filtering. One approach is to rely on context data. This enables easy automation Analysis and Filtering and is efficient due to the simple nature of context data. In addition, it is possible to evaluate the coverage of the data without taking the raw sensor data into account.

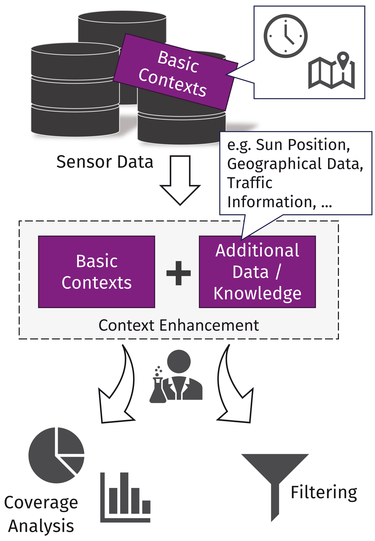
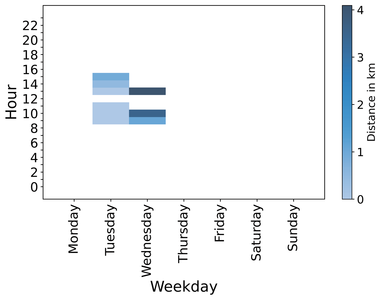


Figure 1: Analysis and Filtering of the raw data based on basic context data

Basic context data

By basic contexts, we mean the data that is recorded as metadata in data acquisition anyway. In our case these are: time, position and heading.
To get an overview of the recorded data the first analyses can be performed on these basic context data points.



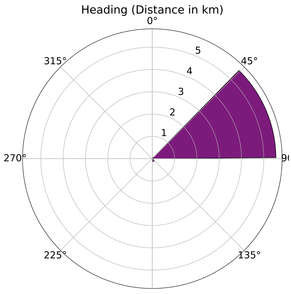


Figure 2: Example analyses of the recorded data based on basic context data

Combination with additional data

Even though these basic contexts provide an impression of the data coverage, they are not sufficient for all use cases e.g. for the composition of special perception data sets. Therefore, enrichment with additional data sources such as the sun position is necessary.

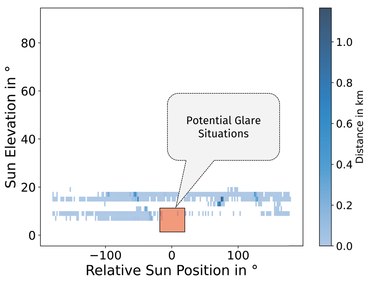


Figure 3: Sun position relative to the heading of the recording vehicle

Based on this advanced context, it is possible to identify special data points such as glare situations. These situations are hard to describe and identify by looking at the sensor data. In contrast, the analysis and filtering on the context level is comprehensible and fast.

Figure 4: Glare situations (J. Geyer et al., "A2D2: Audi Autonomous Driving Dataset," Apr. 2020.)

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