

Big Data Visualization and Spatiotemporal Modeling of Aggressive Driving (03-087)

Dataset available at: <https://doi.org/10.15787/VTT1/KOT55T>

(This dataset supports report **Big Data Visualization and Spatiotemporal Modeling of Risky Driving**)

This U.S. Department of Transportation-funded dataset is preserved by Safety through Disruption (Safe-D) National University Transportation Center in the digital repository Virginia Tech Transportation Institute (<https://dataverse.vtti.vt.edu/>), and is available at <https://doi.org/10.15787/VTT1/KOT55T>.

The related final report **Big Data Visualization and Spatiotemporal Modeling of Risky Driving**, is available from the National Transportation Library's Digital Repository at <https://rosap.ntl.bts.gov/view/dot/56540>.

Metadata from the Virginia Tech Transportation Institute Repository record:

Description:

Project Description:

The study goal was to identify risky driving behavior using data mining methods within a large dataset. The data used in this study was obtained from the SPMD study conducted in Ann Arbor, Michigan.

Data Scope:

One week of SPMD data was processed to create a data table (each row representing a monitoring period) in csv format. Total number of observations for this table was 320 million with a total of 32 variables (i.e., columns).

Data Specification:

A detailed description of each variable in dataset can be found in Appendix A.

Subject:

Engineering

Keyword:

risky driving behavior, big data analytics, cluster analysis, data visualization, data mining

Recommended citation:

Markes, Charles; Jahangiri, Arash; Tsou, Ming-Hsiang; Nara, Atsushi; Machiani, Sahar Ghanipoor, 2019, "Big Data Visualization and Spatiotemporal Modeling of Aggressive Driving (03-087)", <https://doi.org/10.15787/VTT1/KOT55T>, VTTI, V1

Dataset description:

This dataset contains 1 .zip file collection described below.

Standardized Performance Evaluation of Vehicles with Automated Capabilities.zip:

This collection contains 7 files and 2 files types, listed below.

- Appendix A-VariableDescription.pdf
- SafeD-03-087-Data_Apr1.csv
- SafeD-03-087-Data_Apr2.csv
- SafeD-03-087-Data_Apr3.csv
- SafeD-03-087-Data_Apr4.csv
- SafeD-03-087-Data_Apr5.csv
- SafeD-03-087-Data_Apr6.csv
- SafeD-03-087-Data_Apr7.csv

File Type Descriptions:

- The pdf file extension is first and foremost associated with Adobe Acrobat Portable Document Format (PDF) documents. Portable Document Format (PDF) is a file format proprietary to Adobe Systems for representing two-dimensional documents in a device independent and resolution independent fixed-layout document format. Each PDF file encapsulates a complete description of a 2D document (and, with the advent of Acrobat 3D, embedded 3D documents) that includes the text, fonts, images, and 2D vector graphics that compose the document. PDF files do not encode information that is specific to the application software, hardware, or operating system used to create or view the document. This feature ensures that a valid PDF will render exactly the same regardless of its origin or destination (but depending on font availability). PDF files are most appropriately used to encode the exact look of a document in a device-independent way. While the PDF format can describe very simple one page documents, it may also be used for many pages, complex documents that use a variety of different fonts, graphics, colors, and images. (for more information on .pdf files and software, please visit <https://www.file-extensions.org/pdf-file-extension>)
- The csv file extension is commonly used to files in Comma Separated Value format. A comma-separated values file is a simple text format for a database table. Each line in the CSV file corresponds to a row in the table. Within the line, fields are separated by commas, each field belonging to one table column. The CSV is a simple file format that is supported by many applications. (for more information on .csv files and software, please visit <https://www.file-extensions.org/csv-file-extension>)

National Transportation Library (NTL) Curation Note:

As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (<https://doi.org/10.21949/1503647>) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset.

NTL staff last accessed this dataset at <https://doi.org/10.15787/VTT1/KOT55T> on 2021-07-15

If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.