Standardized Performance Evaluation of Vehicles with Automated Capabilities (VTTI-00-020)
Dataset available at: https://doi.org/10.15787/VTT1/D946JJ

(This dataset supports report **Standardized Performance Evaluation of Vehicles with Automated Capabilities**)

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/D946JJ.

The related final report **Standardized Performance Evaluation of Vehicles with Automated Capabilities**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/56322.

Metadata from the Virginia Tech Transportation Institute Repository record:
Description:
Project Description:
The near-term goal of this project was to develop and evaluate an initial set of standardized test procedures that vehicles equipped with automated driving features could undergo to compare capabilities and limitations across different implementations of automated technologies. In the longer term, this project will provide a basis for future automated-vehicle testing and gather evidence to help researchers determine the value of standardized testing as part of an automated-vehicle conformance process. In Spring 2018, using the Virginia Tech Transportation Institute Smart Road, a controlled access test bed, and a fleet of vehicles equipped with automated driving features (i.e., ACC, LKA, and AEB), this initial project focused on answering two research questions:

1. What testing should be conducted to evaluate both current and forthcoming capabilities of vehicles with automated driving features?
2. How do currently available vehicles with automated driving features perform under the proposed standardized set of evaluations?

Data Scope:
The data set includes trial-specific variables and subjective, quantitative vehicle performance scores assigned by researchers. Each vehicle is coded with a number to protect the manufacturers' identities. The vehicle performance scoring criteria for each test can be found on the first sheet.

Data Specification:
See attached data dictionary pdf.

Subjects:

Engineering; Other

Related Publication
Basantis, A., Doerzaph, Z., Harwood, L., & Neurauter, L. (2019). Developing a Standardized Performance Evaluation of Vehicles with Automated Driving Features. SAE International Journal of Connected and Automated Vehicles, 2(3), 1–16. doi: 10.4271/12-02-03-0011. doi: doi: 10.4271/12-02-03-0011

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Dataset description:
This dataset contains 1 .zip file collection described below.

Standardized Performance Evaluation of Vehicles with Automated Capabilities.zip:
This collection contains 2 files and 2 files types, listed below.
- Standardized Performance Evaluations Data Dictionary.pdf
- SPE Final Dataset.xlsx

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)
- File extension xlsx is associated with Microsoft Excel, one of the most popular and powerful tool for creating spreadsheets, graphs and much more. (fore more information on .xslx files and software, please visit https://www.file-extensions.org/xlsx-file-extension)