

Driver360: A Four-Dimensional Scanning System to Better Understand Drivers Dataset

Dataset available at: <https://doi.org/10.7910/DVN/LMPH3U>

(This dataset supports report **Driver360: A Four-Dimensional Scanning System to Better Understand Drivers**, http://safersim.nads-sc.uiowa.edu/final_reports/UI%205%20Y2%20Final%20Report.pdf)

This U.S. Department of Transportation-funded dataset is preserved by the SAFER-SIM University Transportation Center in the Harvard Dataverse Repository (<https://dataverse.harvard.edu/>), and is available at <https://doi.org/10.7910/DVN/LMPH3U>

The related final report **Driver360: A Four-Dimensional Scanning System to Better Understand Drivers**, is available from the National Transportation Library's Digital Repository at <https://rosap.ntl.bts.gov/view/dot/42281>

Metadata from the Harvard Dataverse Repository record:

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Title: Driver360: A Four-Dimensional Scanning System to Better Understand Drivers

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Description: The main objective of this project was to construct a four-dimensional (4D = spatial + temporal) scanning system that can be installed in a driving simulator environment. The novel 4D scanning system, named Driver360, comprises 32 digital single lens reflex (DSLR) cameras and captures time-synchronized highdefinition (HD) videos ($\geq 1080p$) of a subject sitting in and operating a driving simulator from different angles. In this project, a portable structure that mounts the cameras and can be attached to the existing NADS MiniSim simulator was designed, tested, and manufactured. The structure comprises three moveable stands that are attached to the front, left, and right sides of the NADS MiniSim setup. The cameras mounted on the stands are facing the driver seat from a configuration that we empirically found is suitable. An electronics-controlled triggering system of the Driver360 system was added so the cameras can be triggered all at once.

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Dataset description:

This dataset contains 1 zip file collection described below.

README_MINISIM.txt:

The README file provides documentation on the dataset and the other files. The .txt file type is a common text file, which can be opened with a basic text editor. The most common software used to open .txt files are Microsoft Windows Notepad, Sublime Text, Atom, and TextEdit (for more information on .txt files and software, please visit <https://www.file-extensions.org/txt-file-extension>).

Minisim.rar:

The .rar file contains 81 files further described below. The files are arranged into various folders, and many of the files have previous versions with the original file name with additional numbers added to the end. These files are housed in folders designated “OldVersions.” A .rar file is a compressed archive format that can be opened with WinRAR, and other available software (for more information on .rar files and software, please visit <https://www.file-extensions.org/rar-file-extension>).

- 22 files in .iam: The .iam files have various naming structures using numbers and references to specific parts of a vehicle. The .iam file is an Autodesk Inventor file, which is a 3D solid modeling and design tool used to design and simulation 3D digital prototypes and shares 2D data from the AutoCAD and 3D design data from other Autodesk's applications. The Autodesk Inventor software is available for Microsoft Windows (for more information on .txt files and software, please visit <https://www.file-extensions.org/iam-file-extension>).
- 57 files in .ipt: The .ipt files naming structure references specific parts of a vehicle. The .ipt files is another file output that is used by Autodesk Inventor, similar to the .iam file type mentioned above (for more information on .txt files and software, please visit <https://www.file-extensions.org/ipt-file-extension>).
- 1 file in .txt: The .txt files is titled readme-and-terms-of-use-3d-cad-models.txt. This files contains additional documentation and contact information for the dataset. The .txt file type is a common text file, which can be opened with a basic text editor. The most common software used to open .txt files are Microsoft Windows Notepad, Sublime Text, Atom, and TextEdit (for more information on .txt files and software, please visit <https://www.file-extensions.org/txt-file-extension>).
- 1 unknown file type: This file is titled _DS_Store.

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://ntl.bts.gov/public-access>) 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/10.7910/DVN/LMPH3U> on 2019-09-05. 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.