

NHTS Data Challenge

Overview

Since 1969, the Federal Highway Administration (FHWA) has been collecting travel behavior data to answer evolving questions related to how, why, when, and where people travel through a probability-based random sampling survey approach. The 2017 National Household Travel Survey (NHTS) is the eighth and most recent survey in this series and the results will be used to inform transportation policy and planning efforts at the Federal, state, and local levels.

Can you tell us something original and surprising about transportation, health, commerce, or patterns in America? The 2017 NHTS data is rich and able to provide insight into important questions, if used by thorough and curious researchers. Can you shed light on a topic like commuting, errands, eating habits, walking, household composition, effects of ride sharing, transit use or something else? Develop an idea, analyze the data, and explain the importance of the result.

Data Challenge

This data challenge is a competition for enthusiastic students, professionals, and the public who want to showcase their analytical and technical skills. The participants may work individually or in teams and will have to showcase practical outcome using the 2017 NHTS public use data.

Dataset Description

The 2017 NHTS Users Guide is available here:

<https://nhts.ornl.gov/assets/2017UsersGuide.pdf> This and other resources publicly available on the Oak Ridge National Laboratory (ORNL) website will be helpful to participating teams.

Section 6 describes the file structure, which consists of household, vehicle, person, and trip level datasets. The file relationship is described in detail, including which variables are needed to establish relationships between people within households, for example. Section 7 describes some travel concepts which will be key for teams not familiar with transportation data or weighted survey data.

Evaluation Method

For this competition the submissions will be reviewed by the NHTS Task Force subcommittee. The results must use correct analysis methods, clearly describe data cleaning and analysis tools, and have a summary of outcomes in English. The research question must be clearly stated and the submission should describe the impact of the analysis to transportation, health, commerce, or other fields.

Submission

Each participating team in the data challenge should submit one PDF file containing the executive summary of the results (no more than five pages). The executive summary may include an additional five pages of appendix references, charts, figures, tables, maps, etc. Additionally, teams must upload their code and summarized data. All three portions must be submitted for consideration. Teams should merge their submissions to this GitHub location: <https://github.com/NHTSDataC17/submissions>. Please send your github username or email address to the contact below so that you can be added as a collaborator and can push your submissions.

Deadline

All submissions should be uploaded by **October 1, 2018**. Any submissions received after this date will not be considered.

Prizes

Selected teams will be invited to present a brief summary of their work and findings during the 98th Transportation Research Board Conference in Washington DC. This conference will take place January 13 – 17, 2019. The prize is the opportunity to present the team's project – not any payment for registration, fees, travel, lodging, meals, or other expenses.

Support

Questions about the data challenge and submission requirements may be directed to Cynthia Bland at nhts.data2017@gmail.com.

Acknowledgements

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