Package: xplorer

Description

The objective of the xplorer R package is to make exploratory data analysis available for Gen3 users who are not computationally savvy. Current functions within xplorer (barplotr, pieplotr, and tabler) will allow such users to assess data distribution to answer hypothesis-driven questions, highlight potential pitfalls and new directions for data collection. To ensure functions are as intuitive as possible, users must specify a node (data frame) and property name, and optionally a numerical variable, whether to calculate mean of the aforementioned numerical variable, whether to include Project IDs, and whether to generate interactive plots.

Each function includes a series of ifelse statements to generate outputs. Descriptive statistics beyond sample size are also included in outputs (e.g. standard deviation, median, average, and/or proportion of project IDs for response variables). Package will be available for download via Github.com.

Xplorer dependencies: dplyr(), doBy(), htmlwidget(), ggplot2(), plotly(), plyr(), stats(), sunburstR().

Future goals

1. Expand xplorer to include two additional exploratory data analysis – heatmapr() and scatterplotr().

2. Expand xplorer to include inferential statistics – e.g. t-test, anovas, and pearson and spearman correlations.

3. Implement defense programming using base R stop() function. For example, error messages will be as explicit with instructions to resolve the error.

Functions

1. barplotr (node,
        Property_Name,
        y = NULL,
        MEAN = NULL,
        Interactive = NULL)

2. pieplotr (node,
        Property_Name,
        ProjectID = NULL

3. tabler (node,
        Property_Name,
        projectID = NULL,
        y = NULL,

MEAN = NULL)