Diabetes

1. Introduction:

Diabetes is a is a browser-based R Shiny graphical user interface (GUI) for scientists or data experts to explore the Pima Indian diabetes dataset. The Purpose of this application is to determine if the Females that are around the age of 21 and are Pima Indian heritage have diabetes or not.

2. How to start

This is an instruction and how to run Diabetes shiny software locally using shinyapps.io with free RStudio service (http://alladyaditi.shinyapps.io/Diabetes)

Requirement:

- R (>= 4.0.2)
- Shiny (>=1.2.0)

How to install shiny package:

1. Open R.
2. User can install the shiny package by the following command in R:

```
install.packages("shiny ")
```

How to install and run Diabetes locally

1. Open R.
2. Run Diabetes by the following commands in R:

```
library(shiny)
shiny::runGitHub(repo = "Diabetes",username = "alladyaditi",ref="main")
```

(The first module of Diabetes Descriptive Statistics page will pop-up, see Figure 1)

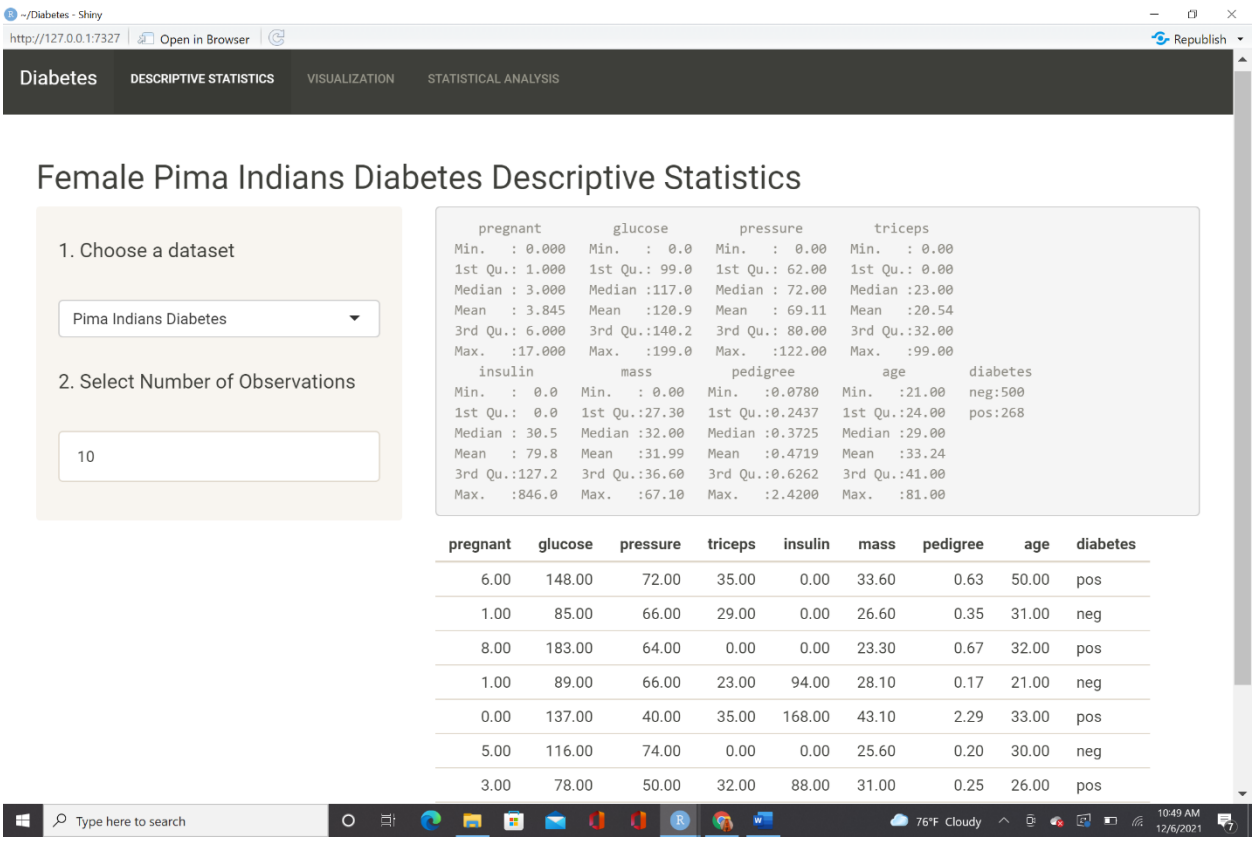

Figure 1: The first module of Diabetes Descriptive Statistics

3. Run Diabetes

Module 1: Descriptive Statistics

The first module contains (1) choose a dataset; (2) Select Number of Observations – RA (Figure 1). User can RA data set by simply the "choose a dataset". They can simply see the continuous and categorical data statistics such as the mean and median and can also view the datasets observations of 10 or more.

Module 2: Visualization

The second module contains (1) y-axis, (2) x-axis, and (3) filter by (Figure 2). The user can use the prima Indian diabetes to box - plot the data. Continuous and categorical data. For example, in Figure two plots glucose vs age and is filtered by if the two variables are diabetes or not.

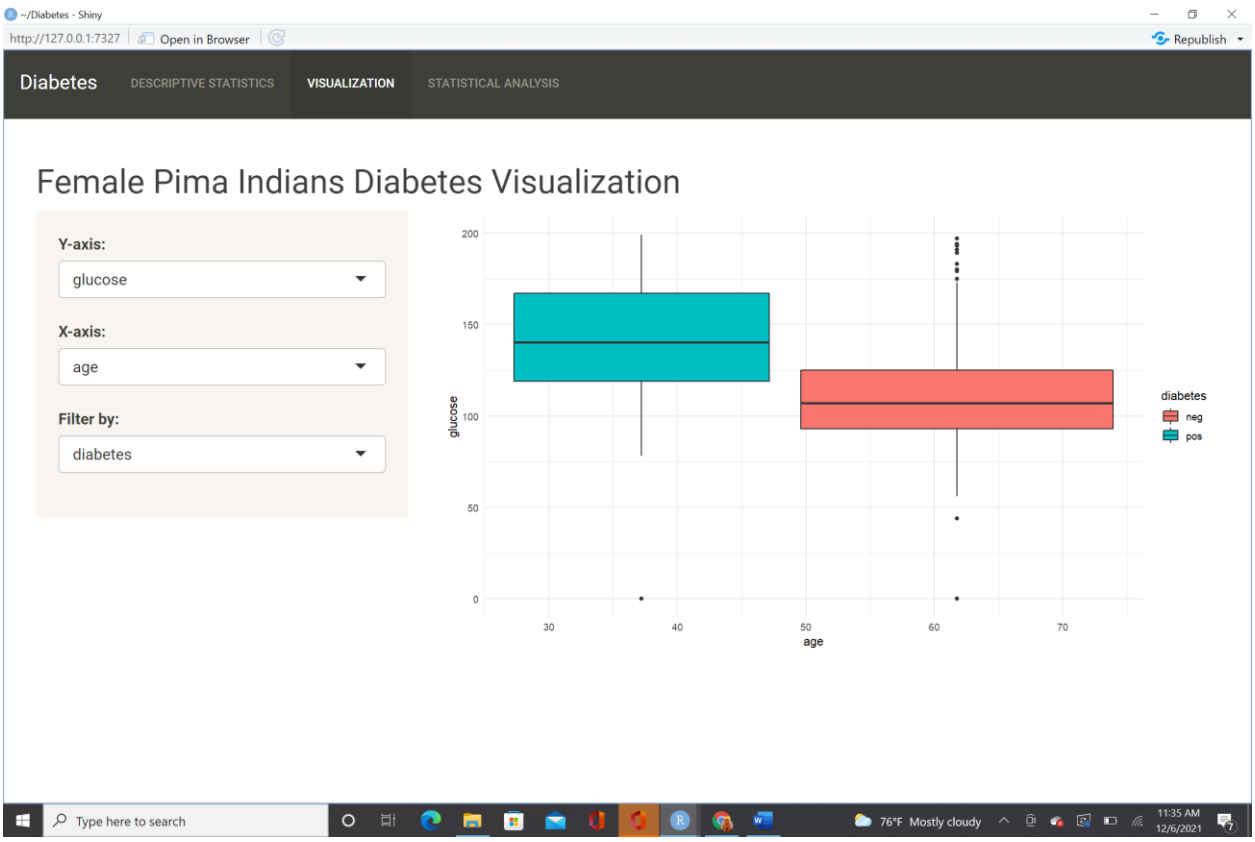

Figure 2: The second module of Diabetes visualization

Module 3: Statistical Analysis

The second module contains (1) choose a dataset, (2) choose a response variable, (3) choose a Explanatory variable, and (4) Select a confidence level (Figure 3). The user can use the prima Indian diabetes to choose a response and explanatory variable and select a confidence level to conduct a

T-test that is one and two sample, and a Wilcox test.

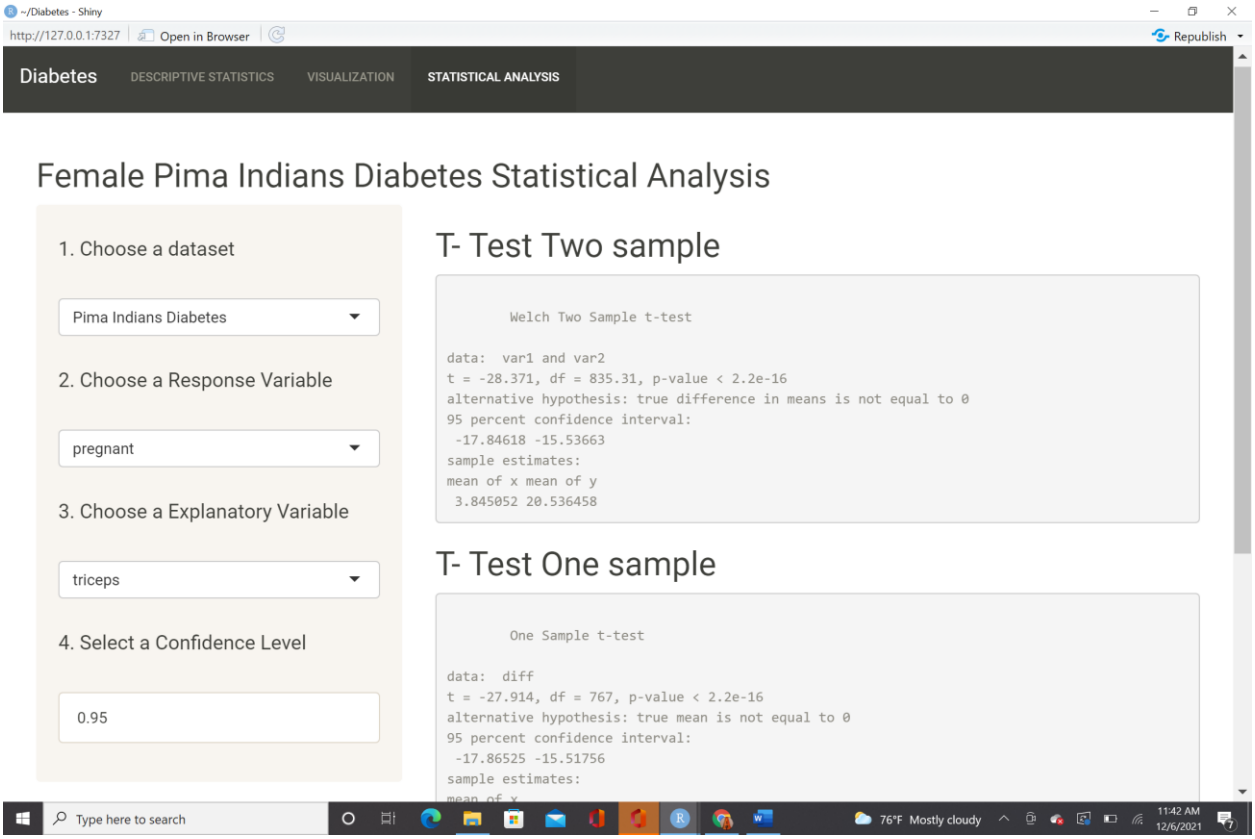

Figure 3: The third module of Diabetes is statistical analysis