ShinyPET: A Predictive, Exploratory and Text RShiny Application using Airbnb data

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ABSTRACT

The increasing availability of data has resulted in the increased demand for data driven decisions. Although there is an extensive range of commercial statistical tools, they are often subscription-based and demand good technical knowledge to mine and draw insights from. Therefore, it may not appeal to the average user.

As such, our project aims to develop a user-friendly application that will enable users to make data-driven decisions without the need to understand programming languages or have extensive statistical knowledge. We will use Airbnb data as our baseline for this project - data generated is rich in information, which consists of structured, unstructured (textual), and location data.

With this application, users will be able to perform text analysis on review and listing data to generate more quantitative insights. The exploratory module allows users to identify interesting patterns based on selected variables. Findings from the exploratory module will be further augmented in the confirmatory module where selection of statistical methods will be guided based on user's chosen variables. Finally, the predictive module enables users to prepare and build a variety of prediction models without needing to have in-depth understanding of the predictive models and its algorithms.

1. MOTIVATION OF THE APPLICATION

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2. LITERATURE REVIEW

Review and critic on past works

3. DESIGN FRAMEWORK

A detail description of the design principles used and data visualisation elements built

4. DEMONSTRATION

- use case

5. DISCUSSION

What has the audience learned from your work? What new insights or practices has your system enabled? A full blown user study is not expected, but informal observations of use that help evaluate your system are encouraged.

6. FUTURE WORK