Certificate Course on Psychoinformatics Using R

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ABSTRACT

The project shows us a brief overview of human psychology of some randomly chosen people based on some verbally collected data and their analysis using R software. Here, we tried to light on some basic nature of the interviewees. Though analysis of Psychoinformatics is mainly done using Big Data, collected from daily digital public data but here we tried to this analysis on the basis of the verbal data.

INTRODUCTION

Psychoinformatics is the reliable measurements of emotion, cognition and behaviors using data analysis. It is an application of computer data analysis of psychological and psychometrical concepts. The data we collected from random people is some of the basic behavioral traits and characteristics of their daily people. The software we used is R which is based on the programming language which is used for statistical computing and data handling.

OBJECTIVE

Our objective for this project is basically to understand the human psychology of common people by knowing and analyzing their day-to-day activities and their thinking and approach towards different situations in their daily lives. For this analysis we are using R software to measure the psychological and psychometrical aspects of the people who are interviewed.

MOTIVATION

The eagerness to know the thinking behind the actions of common people in their daily lifestyle and the thirst to find the psychology regarding these actions were the main motivation behind this project. Knowing of a new language R helped us to encourage in this project a lot.

METHODOLOGY

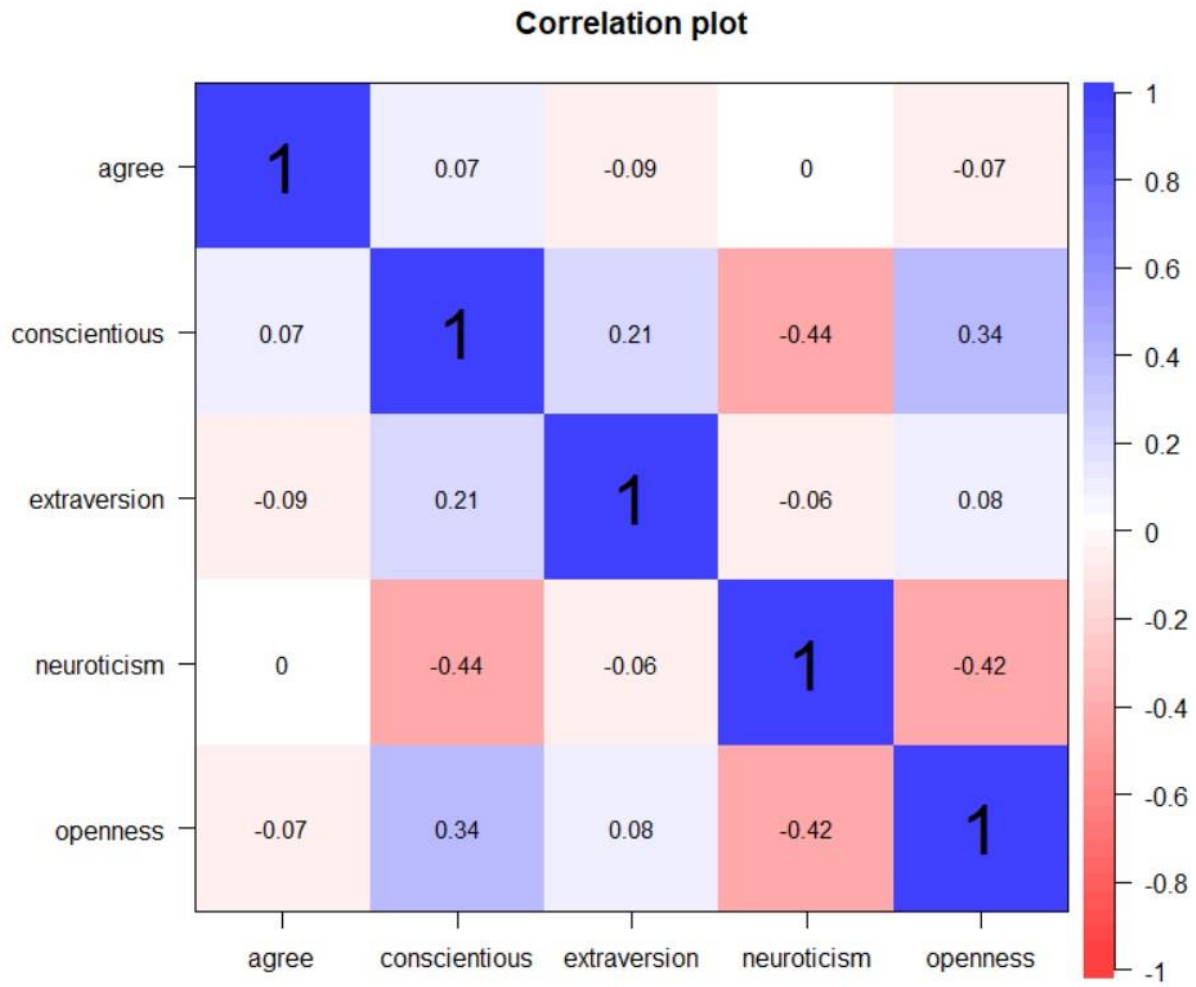
Here, we interviewed some random people with the help of a questionnaire which contains some basic behavioral thoughts on their daily lives, like the

person have frequent mood swings or not, does he dives deep in thought in any particular topic. Questions regarding their agreeableness, conscientiousness, extraversion, neuroticism and openness. They gave themselves rating from 1 to 6 to respective questions in the questionnaire. The names of voluntarily helping people were hidden, just their ages, gender and academic qualifications were asked.

SOFTWARE USED

We have used R software for this project because it is good for Statistical computing and data analysing.

RESULT



From this correlation plots of different characteristics, we can see the various relations among the various characteristics of the interviewees. For example, the people who are open in nature are sometimes conscientious or the people who are agreeable in nature are not extrovert generally. Such conclusion we can draw from this diagram.

DISCUSSION

From this Correlation plots of various data, we can see the relations among agreeableness, neuroticism, extraversion, openness and conscientious. This kind of plots are very useful to study human natures and psychological aspects. One can use these data to prevent the upcoming mental epidemic because if we predict the human actions before any kind of miserable incidents by knowing the nature of the persons, we can build our system and environment likewise. But also keeping in mind that the data should not be misused and not be used to create any kind of problem in the life of the common people.

CONCLUSION

This project helped us a lot about gaining knowledge about Psychoinformatics. We came to know about what is Psychoinformatics and what the uses of it. We have to collect more data to find better result for this in leading future to make this kind of project more successful. Also knowing a new programming language R for analysing data was very much helpful for our knowledge.

REFERENCE LITERATURE

Appendix A: R Source Code

```
#setting working directory setwd("<path

for working directory>")

#loading various libraries corrplot, psych, reader

library("corrplot") library("psych")

library("reader") #loading external csv file

cor_Data=read.csv(<csv file name of data source>)
```

```
#setting the keys for the questions

keys.list <- list(agree=c("-
A1","A2","A3","A4","A5"),conscientious=c("C1","C2","C3","-
C4","-C5"),extraversion=c("-E1","-
E2","E3","E4","E5"),neuroticism=c("N1","N2","N3","N4","N5"),

openness = c("O1","-O2","O3","O4","-O5"))

keys=make.keys(cor_Data, keys.list) #scoring the keys of

data scores <- scoreItems(keys.list,cor_Data,totals=TRUE)

#plotting the correlation diagrams cor.plot(scores$scores)
```