

# Volunteering is seasonal and is predicted to continue to increase over the next 5 years.

## Profiling volunteering transaction in South Africa.

### INTRO

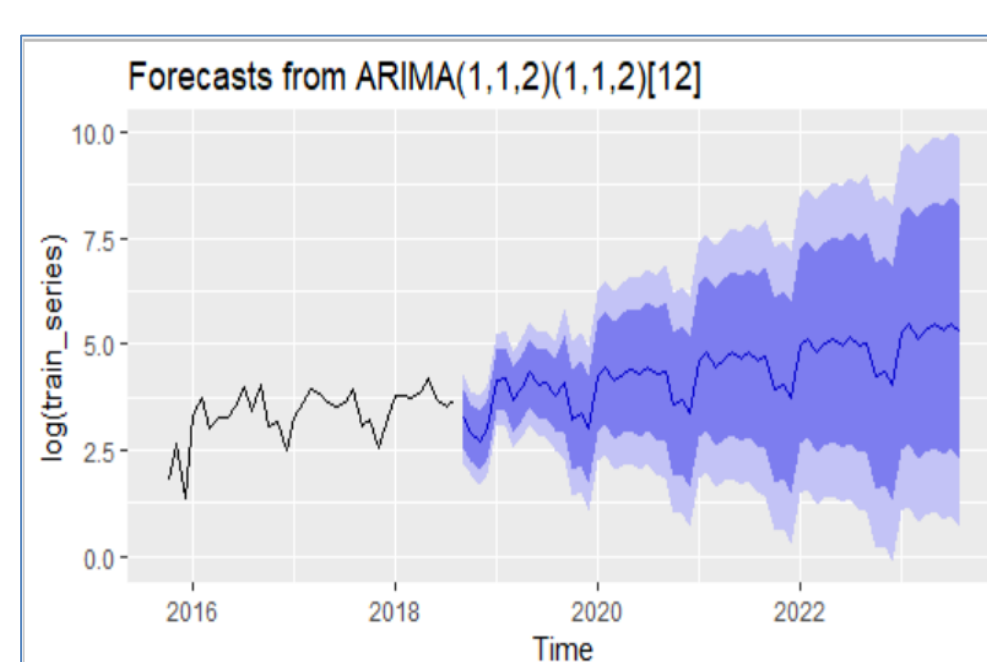
- Forgood is a NPO (Non-Profit Organization) that focuses on linking individuals and corporates with the needs of the society
- Project goals addressed are:
  - Seasonality of volunteering
  - Profiling of causes / charities
  - Profiling users

### METHODS

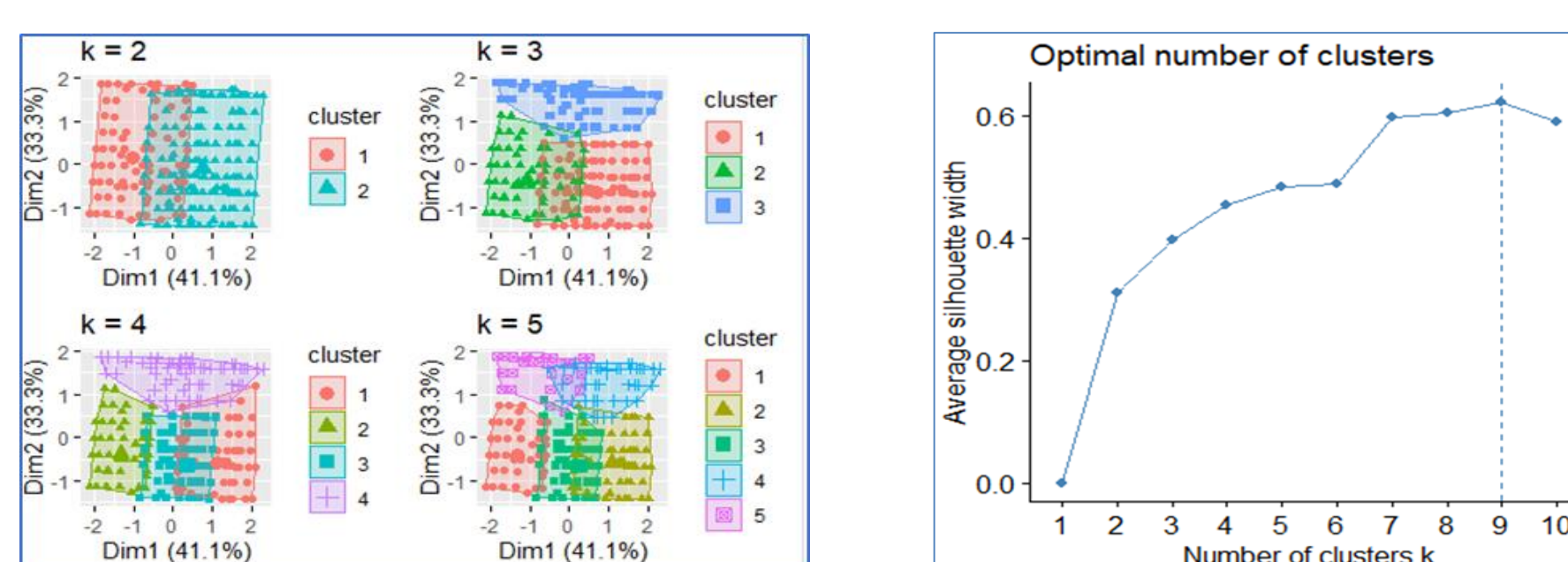
1. AutoRegressive Intergrated Moving Average (ARIMA) used for sesonality of volunteering
2. K-means clustering for profiling causes by location
3. Sentiments analysis for understanding whether there is alignment between sentiments in need titles by causes and offer titles by users

### RESULTS

- Seasonality of volunteering



- Causes Profiling



### DISCUSSION

- The time series modelling using ARIMA confirmed the seasonality of volunteering and predicts a slight, steady but seasonal increasing trend, meaning number of donations (time and good) increasing over the next 5 years.
- The optimal k obtained was 9 clusters corresponding to 9 provinces. The clusters identified that causes typically have needs that are in the geography of where they are established.

👤 **Tebogo Motlhamme, Nkosana Guga**

## AMMO BAR

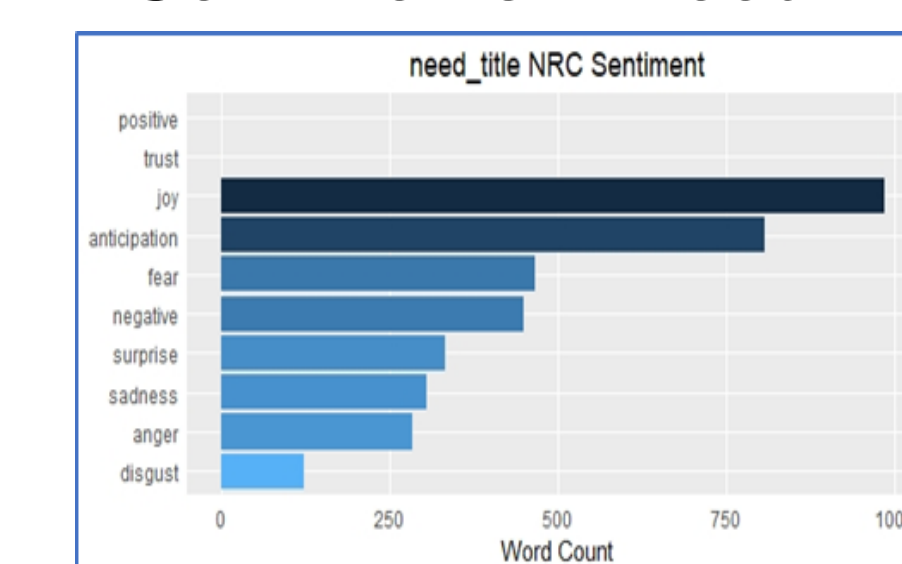
- Word cloud of words used by causes in need titles



- Popular words by Province



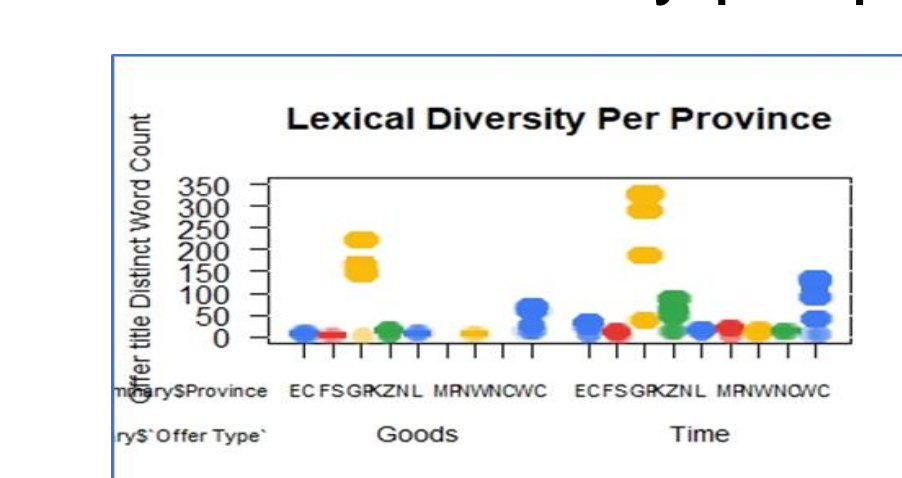
- Sentiments in need titles



- Word cloud of words used in offer titles by users.



- Lexical diversity per province per offer type



📱 Scan me



Department of Computer Science

Faculty of Engineering,  
Built Environment and  
Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en  
Inligtingtegnologie / Lefapha la Boetšenere,  
Tikologo ya Kago le Theknolotši ya Tshedimošo

Capstone Project - MIT 808

Course Coordinators:

Dr. Vukosi Marivate (vukosi.marivate@cs.up.ac.za)  
Abiodun Modupe (abiodun.modupe@cs.up.ac.za)

