

INTRODUCTION

AusIMM delivers an ongoing program of professional development services to ensure members are supported throughout their careers, enabling them to provide high-quality professional input to industry and the community.

The AusIMM membership is basically divided into 5 categories: -

Student, Associate, Member, Fellow & Chartered Professional

AusIMM is focused on developing and promoting best practice professionalism in the resource sector.

AusIMM Key point Indicators are

- **Member Base-** Servicing member needs and support.
- **Events-** Networking for members with similar interests and prospective future engagements
- **Communities-** Group of member interacting and engaging in value collaboration.

AIM

Business Problem:

To analyze the credibility and drive the revenue diversification strategy through “Market/Member- Based approach”

Focus Areas:

- Segment Analytics to generate Personas.
- Cost to serve Analysis for an event.
- Google Analytics Dashboard Customization.
- Sentiment Analysis for emails.
- Events Operational Support and Analysis
- Data Governance to handle inconsistency from the databases.

METHODOLOGY

Tools

For the purpose of completing our objectives, we will be using tools like Microsoft Excel, R Studio, Google Analytics.

Data Acquisition and Pre-Processing

- Assessing and Understanding Data
- Structuring/ Formatting Data for analysis
- Leads to Data Governance

Data Visualization – Insights from Data

Visualizing the data provides us with insights (Figure 1) about members as well as events.

- Age profile , Education, Areas of Interests and Professional Experience.
- Type of Event, Community engagement and Industry association.

Data Modelling

Sentiment Analysis – For Inbound Emails

(Figure 2)

- Its an automated process that uses Artificial Intelligence to identify positive, negative and neutral opinions from text.
- Based on various types we have chosen Emotion detection on emails.

Clustering Unsupervised Learning –

Segment Analytics to generate Personas

Clustering is a process of collection of data items which are “similar”.

K-Means Clustering (Figure 3)

- Algorithm uses K number of clusters and a distance measure for similarity with K centroids at random from data.
- Clusters are used to define new personas for segmenting members.

Forecasting and Time Series Analysis – Cost to serve Analysis for an event & Operational Support (Figure 4)

- Assessing the historical events, its trend and errors we made a state space model.
- Best model was chosen with least MASE score
- Model is used for forecasting engagement rate and Cost to Service an event.

RESULTS

Data Visualization

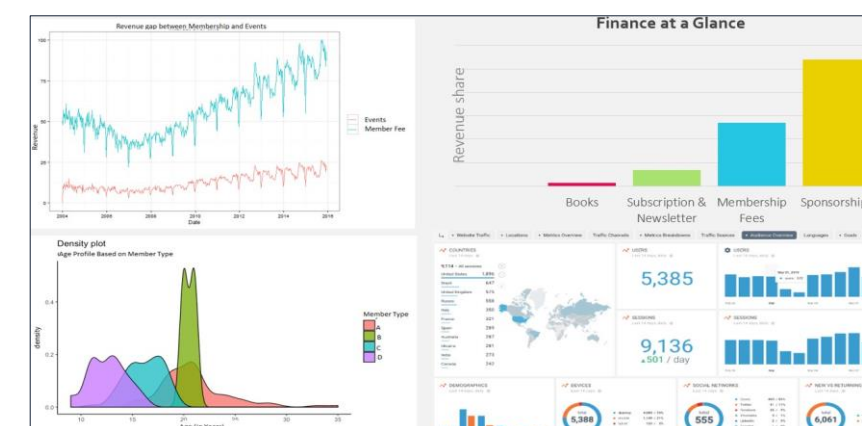


Figure 1 – Visual Insights from Raw Data

Emotion Detection On Emails

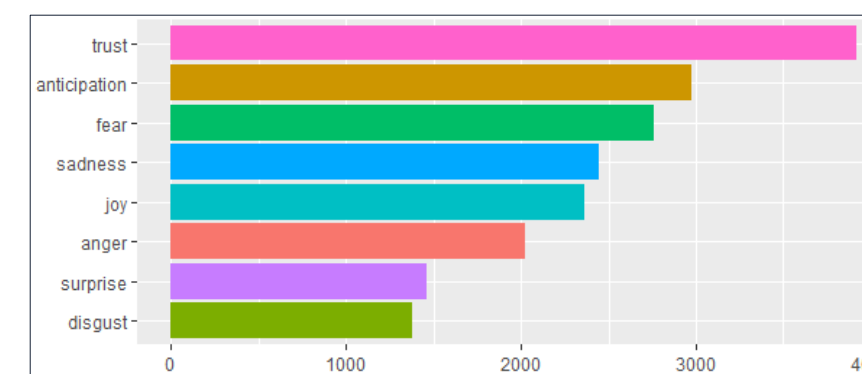


Figure 2 – Results of Sentiment Analysis

Clustering For Segmentation

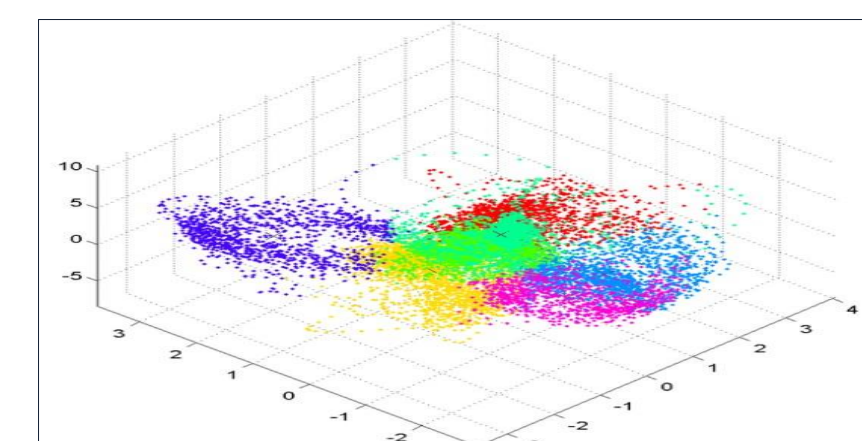


Figure 3 – Results of Clustering k - means

Forecasting Event Parameters

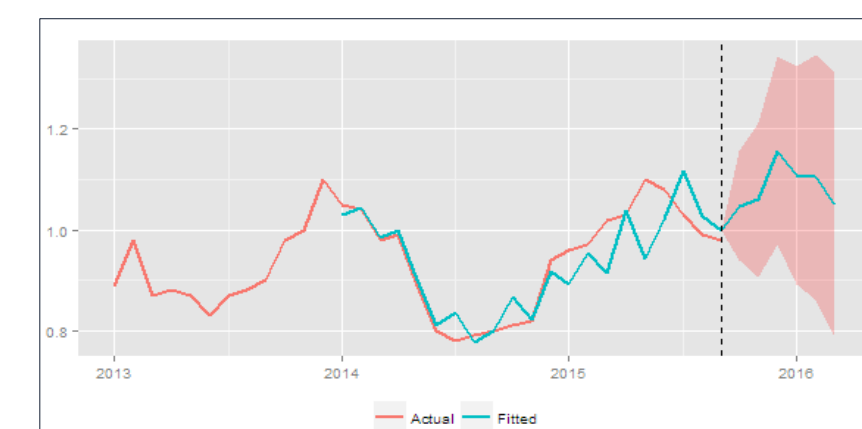


Figure 4 – Results of Forecasting techniques

GOOGLE ANALYTICS DASHBOARD



Figure 5 – Google Analytics Dashboard

Google Analytics Dashboard for understanding social and digital engagement

CONCLUSIONS

- The 8 segments are used for devising a marketing plan that will enhance the member base and revenue generated by targeting specific segments.
- Sentiment Analysis showcased that emails from the marketing team had a higher negative response.
- Forecasting models helps us estimate a cost to service an event as well as average number of members attending the event.
- Life time value can be formulated if the data governance model is incorporated.
- Google Analytics helps explore the behaviour and demographic for non-members.

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