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# 1 – Introduction (100 Words?)

To determine whether there is a link between the sentiment of a TV show and the viewer ratings. This project will explore areas of sentiment analysis, different ways to perform sentiment analysis, why is this relevant and how will others benefit from this. This will involve some data analysis and manipulation to find out if there are any correlations. This chapter explores the background of the research as well as a justification for it. The aims and objectives are also considered.

## 1.1 – Background (100 words)

WHAT?

Sentiment analysis has been defined as opinion mining Ding, et al. (2008).

WHY?

According to Feldman (2013), sentiment analysis is used to look at the “decision-making process of people”. The value of this is we can better understand them as consumers, voters, reviewers etc.

## 1.2 - Justification (350 words)

(why? Practitioner and academic value)

Feldman (2013) states that by using sentiment analysis it “offers these organizations the ability to monitor the different social media sites in real time and act accordingly”. This would give companies a much better understanding of their customers and can benefit from this.

## 1.3 - Aims and objectives (100 words)

The aim of this project is to create a script which will look at the sentiment of an episode of a TV show and the viewer ratings and see if there is a link between them.

* To perform a literature review of sentiment analysis.
* To investigate the sentiment of a TV show, per episode/season.
* To investigate the viewer rating of a TV show from reviewer websites.
* To investigate if there is a link between both results.

## 1.4 – Conclusion (100 words)

## Deliverables?

* Dissertation
* R-Script which will be created to do the sentiment analysis.
* User manual which will be created to guide other people through the script.

# 2 – Lit Review

## Clear Outputs

Sentiment analysis has also been referring to it as ‘brand monitoring,’ ‘buzz monitoring’ and ‘online anthropology,’ to ‘market influence analytics,’ ‘conversation mining’ and ‘online consumer intelligence’ Pang & Lee (2008).

**What does it do?**

Sentiment analysis is a method of analysis which looks at the emotion of a word with the positivity and negativity of the said word. This style of analysis is used in marketing to measure the reviews of a service or product with the product reviews Taboada, et al (2011).

**Types of sentiment analysis**

There are multiple types of sentiment analysis, which looks at different types of entities within a data set. These different types are called: Document-level sentiment analysis, Sentence-level sentiment analysis, Aspect-based sentiment analysis, Comparative sentiment analysis and Sentiment lexicon acquisition Feldman (2013).

* **Document-level sentiment analysis;**
  + **Whole document is on same attribute**
  + **Supervised learning**
  + **Unsupervised learning**
* **Sentence-level sentiment analysis;**
  + **Whole document is on same attribute**
  + **Looks at polarity per sentence**
* **Aspect-based sentiment analysis;**
  + **Known as feature-based sentiment**
  + **Used to identify sentiment of many attributes**
* **Comparative sentiment analysis;**
  + **Comparing a product to another**
  + **Looks for words like, (More, less, lighter)**
* **Sentiment lexicon acquisition.**
  + **Lexicon is most common**
  + **Uses Dictionaries**
  + **Can be hand coded or crowd sources (BagOfWords Method)**

“This approach allows the system to handle opinion words that are context dependent, which cause major difficulties for existing algorithms” Ding, et al. (2008).

## 2.1 – Current Software (IBM & Google)

# 3 – Design

## 3.1 – Use outputs

# 4 – Implementation (Prototype/Deliverable)

## 4.1 – Based on design

# 5 – Evaluation of prototype/deliverable

# 6 - Conclusions

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# LSEPI – (Put in appendix in final)

## Legal

Software licenses – The aim of this project is to use open source tools which will give anyone the ability to follow along with this project.

## Social

Anonymity of user input – With the use of web scrapping for this project, this could be a difficult issue for some websites. For the types of websites this project will focus on, have a developer version which allows users to download and analyse their data sets. This has been confirmed in the Terms Of Service (TOS) and usually requires the user to create an account and tell the company why/what you’ll be doing with the data.

## Ethical

To lay out the rules for ethics, we would have to take into account of how personal it can be from person to person. Whilst it can be interchangeable usually the work place would follow some general ethical concerns.

* To treat people fairly
* To respect the autonomy of individuals
* To act with integrity
* To seek the best results

## Professional

Five characteristics of a professional!?

A professional should be someone who has the following:

* A duty of care
* A responsibility for consequences

This also falls under the BCS Code of Conduct which is the body of British Computer Society, who sets out the professional standards required as part of their members.

Within the BSC Code Of Conduct they state that all members, no matter their rank or length of being a member will provide public interest.

(Look at BSC Code Of Conduct)

## Issues

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