**Assignment 2**

**Goals of the visualisation**

The goals of the visualisation are to find links between characters, cars and words that are not previously known.

**Visualisation audience**

The visualisation was made for fans of the show, including myself. This visualisation was not made to be reusable with different data, it is going to be customised for the show. This means that visualisations can be customised to match the style of the show.

**Applied Strategies**

**Data Source**

There are two sources for the data. One is the subtitles of the show. The other is a fan wiki. Python will be used to get the words from the subtitle files. Python will be used to scrape the wiki for text data. Some brief data analysis was done for ideas on potential visualisations

**Design**

Design of some possible visualisations are done on paper. After a rough layout of the full dashboard with interaction strategies are drawn. Due to the custom designs, during design it was found that it is not possible to use python libraries to create such a dashboard, so d3.js will be used. The canvas will be a website browser, this means that design has to take into account different size screens and portrait/landscape modes.

**Programming**

Due to difficulty and time constraints some changes might have to be made. Rough prototypes were made in vanilla d3.js. Needing an easier way to handle reading data, interactivity, and scalability meant that React.js will be used to aid this.

# Appendix A: Analysis/Design Worksheet

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| **Data Types** | | **Analysis Type and Level** | | | |
|  |  |  | Micro | Meso | Macro |
| Time(frame) |  | Temporal |  |  |  |
| Spatial/Region |  | Geospatial |  |  |  |
| Topical Area | Every word in each episode. | Topical | Checkmark with solid fill |  |  |
| Network | Between cars and parts. Each car and episode it is in was extracted | Network |  | Checkmark with solid fill |  |

## General Features of the Visualisation

|  |  |
| --- | --- |
| **Variables/Entities** | Characters, cars, words, word counts, character sentiment |
| **Classification of the Visualisation** *(Data, Infographics, explanation, conceptual, declarative, …)* | Interactive web-based visualisation. Offers exploratory and explanatory analysis |
| **Task By Data Type Strategy** *(Overview, zoom, filter, details-on-demand, relate, history, extract)* | Character: Selecting a character will show their episode appearance, mentions and sentiment  Hovering over a car should change the world cloud mask to that car |
| **Interaction Strategies** | Selecting Characters to change data  Selecting car to change world cloud mask  Clicking high beam icon to activate dark mode |
| **Canvas and Media** | Interactive Dashboard  Work on PC or on a tablet if working on the go |
| **Design consideration for ‘mental models’** | **Informative dashboard.** To confirm/deny cliches  **Entertainment.** Fans to get better understanding on favourite characters |
| **How was the information organised (LATCH)?** *(location, alphabet, time, category, hierarchy)* | Hierarchy: Characters are more important when it comes words as they speak them. They will be the main focus when the screen loads. After that visuals about cars. |

## Encoding of Variables / Entities

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| **Attribute 1:** | | **Words** | | | | | | | |
|  | | **Categorical** | | **Ordinal** | **Interval** | **Ratio** | | **Text** | **Other(s)** |
| **DATA SCALE**  *Please tick the right box, or describe if other variables are used* | | **[ ]** | | **[ ]** | **[ ]** | **[ ]** | | **[ X ]** |  |
| **VISUALISATION TYPE** | **Chart** | | **Table** | | **Graphs** | | **Geospatial Maps** | **Network Graphs** | **Other(s)** |
| *Please tick the right box, or describe if other visualisation types are used* | **[ ]** | | **[ ]** | | **[ ]** | | **[ ]** | **[ X ]** | Word Cloud |
|  | **Position** | | **Form** | | **Colour** | | **Texture** | **Style** | **Other(s)** |
| **VISUAL ENCODING**  *Please describe how the attribute / variable has been encoded* | For chord diagram, angle/rotation and position is important as around the arc as it must be easy to read | | For word cloud, words.  For chord diagram they will be shown as labels | | Different colours for world cloud. Colours must look good against white and black background | |  | Word cloud shape should be shaped/masked in the style of a car |  |

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| **Attribute 1:** | | **Words Counts** | | | | | | | |
|  | | **Categorical** | | **Ordinal** | **Interval** | **Ratio** | | **Text** | **Other(s)** |
| **DATA SCALE**  *Please tick the right box, or describe if other variables are used* | | **[ ]** | | **[ ]** | **[ X ]** | **[ ]** | | **[ ]** |  |
| **VISUALISATION TYPE** | **Chart** | | **Table** | | **Graphs** | | **Geospatial Maps** | **Network Graphs** | **Other(s)** |
| *Please tick the right box, or describe if other visualisation types are used* | **[ ]** | | **[ ]** | | **[ ]** | | **[ ]** | **[ X ]** | Word Cloud,  Gauges, Chord diagrams |
|  | **Position** | | **Form** | | **Colour** | | **Texture** | **Style** | **Other(s)** |
| **VISUAL ENCODING**  *Please describe how the attribute / variable has been encoded* |  | | For word cloud, words.  For chord diagram they will be shown as labels | | Different colours for world cloud. Colours must look good against white and black background | |  |  | Size of word in the word cloud should be affected by the count.  For chord diagram is should effect the ribbon width |

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| **Attribute 1:** | | **Character sentiment** | | | | | | | |
|  | | **Categorical** | | **Ordinal** | **Interval** | **Ratio** | | **Text** | **Other(s)** |
| **DATA SCALE**  *Please tick the right box, or describe if other variables are used* | | **[ ]** | | **[ ]** | **[ X ]** | **[ ]** | | **[ ]** |  |
| **VISUALISATION TYPE** | **Chart** | | **Table** | | **Graphs** | | **Geospatial Maps** | **Network Graphs** | **Other(s)** |
| *Please tick the right box, or describe if other visualisation types are used* | **[ ]** | | **[ ]** | | **[ ]** | | **[ ]** | **[ ]** | Gauge |
|  | **Position** | | **Form** | | **Colour** | | **Texture** | **Style** | **Other(s)** |
| **VISUAL ENCODING**  *Please describe how the attribute / variable has been encoded* | Value should be normalised so that the lowest score will give a low or empty gauge reading and vice versa. | | Styled like a car petrol gauge | | Black, red and white to look like car tachometer | |  |  |  |

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| **Attribute 1:** | | **Episode Appearance/Episode Mentions** | | | | | | | |
|  | | **Categorical** | | **Ordinal** | **Interval** | **Ratio** | | **Text** | **Other(s)** |
| **DATA SCALE**  *Please tick the right box, or describe if other variables are used* | | **[ ]** | | **[ ]** | **[ X ]** | **[ ]** | | **[ ]** |  |
| **VISUALISATION TYPE** | **Chart** | | **Table** | | **Graphs** | | **Geospatial Maps** | **Network Graphs** | **Other(s)** |
| *Please tick the right box, or describe if other visualisation types are used* | **[ ]** | | **[ ]** | | **[ ]** | | **[ ]** | **[ ]** | Gauge |
|  | **Position** | | **Form** | | **Colour** | | **Texture** | **Style** | **Other(s)** |
| **VISUAL ENCODING**  *Please describe how the attribute / variable has been encoded* | Important visual, it will be the focus, large and should be on the main page | |  | | Black, white and red, similar to a car tachonmeter | |  | Styles like a car speedometer | Font used should be the same as the one used in cars from the 80s.  Eurostile and Microgramma |