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| Analysis Report |  |
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|  | What is the best first car? |
|  | Kai Newman |

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|  | Requirements, constraints, and scopeRequirements: Functional:   * Presented in an infographic form. * Give facts and statistics relating to the topic in order to assist the research question as well as the assistance of graphs and explanations * The data is presented simply in order to give an easy understanding of the topic. * The solution provides at least 4 charts displaying information. * That the outcome is a list of cars that make good recommendations as to first vehicles for learners beginning to drive or drive by themselves. * Assists in teaching people about cars and what to look for allowing them to better decide or to understand why such recommendation is being made.   Non-functional:   * Present in an infographic form * Give an easy to read and comprehend breakdown of the market as well as factors relating to the outcome. * Data includes most up to data sources as well as new information regarding the ever changing and expanding car market. * Solution provides relevant information and graphs to the research question * Give an appealing display of all the data that is easy to follow. * Data is only taken from trusted sources and is checked to be reliable as well as correct.   Data required:   * Safety ratings of cars * Fuel efficacy ratings * Insurance costs for vehicles * The availability for replacement parts * Market information like availability and quantity of vehicles * Price ranges for cars on the market. * Needs and preferences of different vehicles * Reliability statistics of different cars * New vs used car comparisons * Ownership cost (upkeep/ servicing) | |  |
|  | Constraints: Economic:   * Final project must be completed by due date (August) * Data must be collected and checked for quality * All data collected must be free to access * Not all cars can be looked into in detail in the limited time   Technical:   * All work must be completed on a MacBook * Data must be compiled using excel or airtable * Limited skill in creating infographics as well as researching   Useability   * The final infographic must be easy to follow and understand   Legal   * All sources must be cited to avoid legal issues regarding copyright   Social   * All secondary sources are trustworthy and unbiased |  |  |

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| Scope: The infographic will present all data related to the research question in a simplified and meaningful way, by using a range of text, numbers, graphics, and interactive features. The SAT solution will clearly support or refute the research question, providing a valid and substantiated conclusion. All information will be based off current or relevant data and only contains text, diagrams and graphics that are accurate and relevant to the topic to provide a complete picture of the research question. The infographic presented will incorporate relevant colours and fonts in an aesthetically pleasing manner.  The solution will mainly be based on a Victorian perspective; however, some secondary data will be sourced from overseas locations. This is due to the difficulty in extracting a range of qualitative data just from Australian sources. Any secondary data used will be correctly referenced to avoid any legal complications. As an infographic hasn't been created before, a new skill/program must be learnt to complete this solution to ensure the solution is easy for users to interpret and navigate. The SAT solution will be completed by late August; this means that due to limited time, not all aspects of all cars can be explored to judge which is a suitable first car for learners in this infographic. |

### Creative and Critical Thinking:

Functional Requirements:

• Data is presented in an easy-to-understand nature

* Will the audience be able to interpret the information presented?
  + Prepare charts for quantitative data, and short sections of text for qualitative information
  + Ask three different aged people to look at SAT solution and record their interpretation of the information provided
  + Ensure charts and text is easy to read, and presented with a common font and/or colour theme
* Digital solution is presented in a static infographic
* Ask three different aged people to look at SAT solution and record whether they are able to understand the infographic
* Ensure interactive features are easy to understand, and presented in a consistent manner
* The infographic contains a variety of data types, including text, numbers as well as visuals.
* Create checklist with data types (text, numbers, and graphics)
* Scan through solution and check off each item if they are included
* Conclude stating whether the outcome presented is viable as well as relevant for the target audience of the infographic
* How much data/information will need to be analysed for this to occur?
* Look at three articles and consider how many data sources are used
* Average these numbers to find out reasonable amount of data sources
* What will the conclusion include?
* Look at three articles to consider what conclusions comprise of
* Make a list of similar elements
* Ensure these are included when conclusion is written
* How will this be measured?
* Ensure conclusion provides summarises research and answers research question
* Ask three different aged people to read the conclusion
* Digital solution includes at least one column or bar chart
* Make sure that A column chart is present
* Create a checklist and mark off present elements
* Does it teach the readers bits of information about cars to give both insight / justification for the outcomes presented
* Aim to include information that isn’t common knowledge
* Include fun facts to further educate the audience about cars and features that make them good for learners
* How will it be measured?
* Complete a follow-up interview with one of the target audience of the infographic in order to see what can be improved for the future as well as what was done well.

Non-functional requirements:

* All data is current
* All data is currently up to date regarding the cars of different years
* All data is within a relevant time frame (for the year of each car in consideration)
* Solution presents text, diagrams and graphics that are accurate and relevant to the topic

Is the data presented accurate?

* Check all sources of data to ensure the author/source is reputable
* Compare data sources against each other to ensure figures and

facts are verified

* If a data source seems questionable, do not use it in SAT solution
* Is the data presented relevant to the research question?
* Read heading of data sources to ensure information provided is relevant to research topic
* If a data source seems questionable, do not use it in SAT solution
* Solution provides a complete picture of research

Is the audience able to reach conclusions after having interpreted the completed solution?

* + Ask three different aged people to look at completed SAT solution
  + Ask a series of questions about the research topic to test how complete their understanding is
  + If the responses collected are not the intended conclusion to be reached from the solution, add or modify the SAT solution to provide complete picture of research
* Infographic relevant colours in an aesthetically pleasing manner

Does the solution include relevant colours?

* Ensure colours used are consistent and show differentiation between different brands and models of cars
* Ask three different aged people to rate the presentation and display of the relevant information
* Infographic uses consistent fonts across SAT solution

Does the solution include similar fonts throughout the infographic?

* Ensure fonts used are consistent throughout the SAT solution
* Ask three different aged people to rate the presentation and display of the relevant information
* All charts are thorough, meaningful and follow relevant conventions

Do the charts follow meaningful conventions?

* Check chart elements to ensure relevant conventions are used

Is a conclusion able to be reached from analysing the charts?

* Ask two other people if they can interpret the information shown on the charts
* Any secondary sources gathered are from trustworthy and reputable sources

Is the source trustworthy?

* Compare data sources against each other to ensure figures and facts are verified
* Check other articles/research conducted by the same company/website to determine the nature of their articles
* Ask yourself if data is subjective; and if so, does it affect the integrity of data
* If integrity is affected, do not use it in SAT solution
* If a data source seems untrustworthy or not reputable, do not use it in SAT solution

Data Requirements:

* The data is all relevant date wise referring to the year of each car.
* The data has information about the car when it was released
* The data also contains information about how the car is going in the current years (2020 – 2024)
* Which cars will be analyzed?
* Provide a list of all manufactures as well as models that will be investigated
* Check off the list as cars are investigated as well as how they rank and if they would be considered good cars for first drivers
* Safety ratings
* What is a standard rating to be considered safe to drive?
* Ask three people what they believe would be a safety rating that makes the vehicle safe to drive on roads by a learner
* Conduct third party research in order to find what is safe.
* What are the disadvantages of different cars?
* Find credible sources online that outline the disadvantages of each vehicle
* Collect data by sending out surveys/questionnaires about what owners don't like about each vehicle
* Who will I collect this data from?
  + Secondary data can be found on credible sources
  + Try and find two to three sources
  + Primary data can also be collected, and asked can be asked about whether they think the car is worth the value
* Range of features available
  + Where will this data be collected from?
    - Find credible sources online that compare cars and features
    - Collect data by sending out surveys/questionnaires about what features are useful and what features would benefit learners