Solent University

Faculty of Business, Law and Digital Technologies

**The Data Project**

**(Software Artefact)**

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# 1. Overview

The font style to use throughout your document is Trebuchet MS as this the font style recommended by Solent University. The font size for text in the body of your document should be 12 pt. Headings should have a suitable font size e.g., 18 pt for main section headings, 16 pt for sub-headings and 14 pt for sub-sub-headings.

In this section, you should explain the aim and objectives of the project. You should provide a summary of the data set briefly discussing the main features of the data. You should also detail any interesting observations regarding the data set.

You should also include a table summarising what requirement have been achieved.

Table 1: Requirement Completion

|  |  |
| --- | --- |
| **Requirement** | **Status** |
| Load the data from a CSV file into memory using the CSV module |  |
| Retrieve a name of listing, host\_name, description, host\_location, and the date the host was created for an individual host by host\_id |  |
| Retrieve host\_name, property\_type, price, minimum\_nights, and maximum\_nights of all Airbnb listing for a specified location |  |
| Retrieve room\_type, accommodates, bathrooms, bedroom, and beds of all Airbnb listing for a specified property type |  |
| Retrieve specific columns of your choice related to an individual host by location |  |
| Load the data from a CSV file into memory using the pandas module |  |
| Identifying the most popular amenities or features that Airbnb guests are looking for |  |
| Analyse the average price of stay in each location |  |
| Analyse the average review scores rating for each location |  |
| Analyse to get insightful information based on your own selection |  |
| Display the proportion of number of bedrooms of Airbnb listing using pie chart |  |
| Display the number of listings for each room type using bar chart |  |
| Display the relationship between accommodates and price using scatter plot |  |
| Display Airbnb prices from 2019 - 2022 with line chart using subplots (one year per plot) |  |
| Display a visualisation of your choice to present customer usage behaviour on Airbnb |  |

**Status options:** Completed/ Partially Completed/ Not Attempted

# 2. Project Implementation

A heading should not be followed directly by another heading. There should be some connecting text. Thus, you should briefly describe the structure of this section here. Then, you can explain the detail in the individual section below. Your explanation should be clear, concise and justified.

#### 2.1 Project structure

Explain the structure of your project. Your explanations should include appropriate detail and terminology.

It would be useful to include a diagram showing your project structure. The diagram can be included in this section as a figure or, if it is large, in the appendices and cited in this section.

You should ensure that any figures or tables are appropriately label following suitable conventions. Generally, the figure or table is centred, and figure captions are placed below a figure and table captions are placed above a table.

The example below shows a figure with a caption.

|  |
| --- |
| Diagram  Description automatically generated |

Figure 1 Customer Behaviour of Car Sale Market Project Structure (Andritsch, J., 2022)

The example of a figure caption above includes a reference. If an image is taken without any modifications from another source, then it should include a reference as shown in the example above. If the image has been adapted then this should be stated in the caption e.g., Figure 1 – Car Market Analysis Project (adapted from Andritsch, J., 2022)

#### 2.2 Modules/ Functions

Explain the implementation of each module/function in your project. You can present each module/function using sub-section topic. More complicated modules/functions should have greater detail whilst smaller and similar functions can be grouped together in your explanation. You may wish to include relevant code snippets to support your explanations. However, you should ensure that you do not simply restate or summarise what is shown in the code but explain how it works (what, how and why).

You should include code snippets as figures with appropriate captions. An example of a code snippet is shown below:

|  |
| --- |
|  |

Figure 2 Code to perform size checks on entities

The code snippet should be short, concise and appropriate formatted. If the code snippet is from another source, then you should also include a suitable reference.

##### 2.2.1 Module/ function name

Explain the functionality implemented in this module/function. Relevant guidelines mentioned in the previous sections should also be followed here.

##### 2.2.2 Module/ function name

Explain the functionality implemented in this module/function. Relevant guidelines mentioned in the previous sections should also be followed here.

##### 2.2.3 Module/ function name

Explain the functionality implemented in this module/function. Relevant guidelines mentioned in the previous section should also be followed here.

##### 2.2.4 …

Explain the functionality implemented in this module/function. Relevant guidelines mentioned in the previous sections should also be followed here.

When you explain in a detail for each module/function a proper example or justification should present. For example, if you implemented your project using main module to control the logical work of your project and utilises the other modules, it may be useful to include an example or two of how the main module utilises the other modules to deliver a function. You may, for example, present this as a diagram or a series of annotated function calls or if you explain your implementation for visualisation, you can discuss how you have derived with specific selection of your own choice for visualisation (what and why). You should include suitable screenshots of the final visualisations.

# 3. GitHub Repository Evidence

A screen shot of your private Git repository. The screen shot need to clearly show your history of your commit of your project implementation. You need to click on the clock symbol on the right conner of your repo.

Graphical user interface, text, application, email

Description automatically generated

Sample screen shot of your commit history:

A screenshot of a computer

Description automatically generated