

A dark blue vertical bar on the left side of the page. A blue arrow points to the right from the bar, containing the text "Term Project".

Term Project

FinanceBot

User Manual

Several thin, curved lines in dark blue and light grey originate from the bottom left corner and curve upwards and to the right.

Team 20 - Milestone IV
MSCI 100

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1.0 Introduction:

This project aims to create a decision support system that will help any decision-maker make decisions. Our team has approached a client working in a firm for digital authentication and financial crime. Our client is the product owner, meaning he is in charge of determining product features and planning out the schedule for executing these features. He oversees assigning the right resources and capital in the correct places.

Our client must decide which of the features presented are the best options. This is done by taking into consideration factors like cost, benefit, and effort of each option, while also making sure of the 'mutually exclusive' and 'precedes' conditionals. The main problem that our client is facing is that his work is mainly manual, and very time consuming. Our Aim is to support key decision making using quantitative analysis. Therefore, we are aiming to automate most of his work and make it easier for him to navigate between the options using VBA on excel.

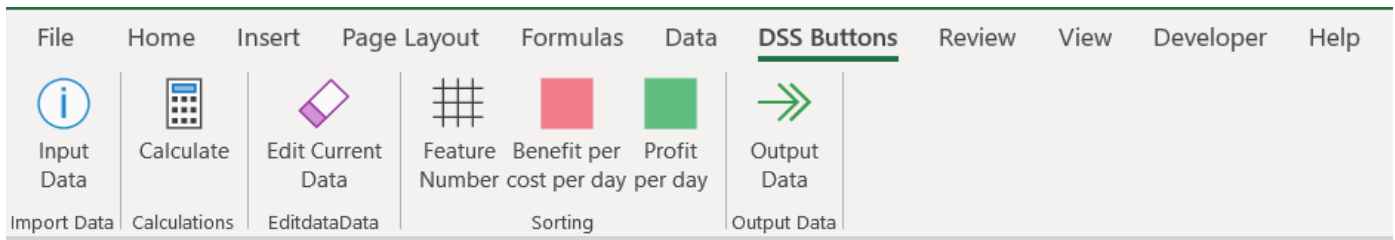
2.0 Description of the DSS Application:

1. User has a widget to rank features based on benefit per day
2. User has a widget to rank features based on profit per day
3. DSS manipulates data with considerations of conditions of mutually exclusive features and preceding features
4. User can enter data manually or import it from an existing file on their device as the user might have up to 500 features to be taken into consideration.
5. User can use a widget to display data in chart form (current selection includes bar and line graph)
6. User can delete data to remove any erroneous data which might affect the DSS's quantitative analysis. User will see a Message Box that prompts them to enter the row to be deleted.

3.0 Installation instructions:

1. Install the excel macro file
2. Give permission to the Excel File and enable the macro content
3. Open File>Options>Customize Ribbon>Import/Export>Import Customization File.
4. Look for the location of this workbook.
5. You will find an EXPORTEDUI File that has a name of "CustomRibbon".
6. Select the File and update the ribbon.

The Ribbon will look like this:

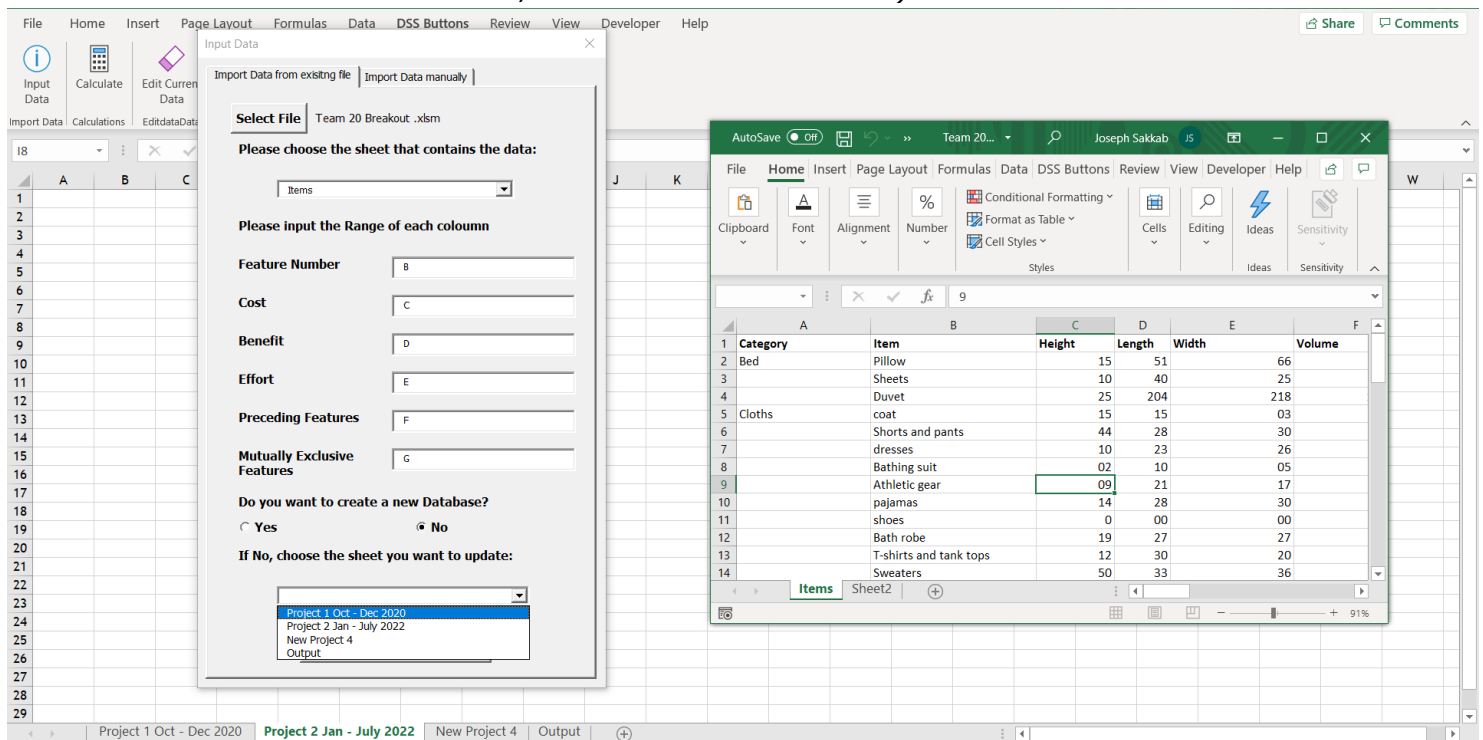


4.0 Entering Data:

To enter Data, click on the Input Data Button, then:

4.1 To enter Data from an Existing File

1. Click on *Select File* and select the file from the file browser
2. Choose the sheet that has the Data you want to import.
3. Type in the letter of the column in which the different factors are present in. (Ex. If the Feature number is present in column B, then type "B" in the designated textbox.) *(Note: Make sure that the file you select does not contain any merged cells within the data range or any empty rows.)*
4. Decide if you want this data to be moved into a new data sheet or an existing one. If you want to import the data into an existing sheet, then you must choose the sheet that you want to import it to. *(Note: Choosing to import the data into an existing sheet will overwrite the data. If you do not want to overwrite the data, see the next section 3.2)*



4.2 Entering Data Manually

1. Click on *Enter Data Manually* (Page 2) from the Input user form.
2. First off, decide if you want the data to be transferred into an existing sheet, or into a new sheet. If you want it onto a new sheet, then you must specify the sheet using the combo box.
3. Enter values for Feature Number, Cost, Benefit, Effort, Mutually Exclusive Features and Preceding Features.
4. Click on the *Insert Data* button, and then the data will be inserted into the sheet. The text boxes will reset for you to enter more data.

NOTE: The user form will not close unless you decide to close it.

5.0 Generating DSS Output:

1. Click on the *Calculate Output* button, which runs preset formulas and calculations.
2. This will calculate two ranks that you can choose to assess the data according to:
 - a) The first rank gives you the Profit per day, which is the amount of profit you can gain from each feature per day.
 - b) The second rank gives you the benefit per cost per day, which gives you the amount of benefit you can gain per the cost per day for each feature.

File Home Insert Page Layout Formulas Data DSS Buttons Review View Developer Help															
Input Data Calculate Edit Current Data Feature Number Benefit per cost per day Profit Output Data															
Import Data Calculations EditdataData Sorting Output Data															
Yes															
1	Feature Number	Cost (\$)	Benefit (\$)	Effort (Days)	Preceding Features	Mutually Exclusive Features	Profit	Profit per day	Benefit per cost	Benefit per cost per day					
2	flat iron	3.80	30.00	2.50	285	Yes	26.20	10.48	7.89	3.16					
3	hand sanitizer	7.00	18.00	5.00	630	Yes	11.00	2.20	2.57	0.51					
4	reusable water bottle	6.00	25.00	9.00	1350	No	19.00	2.11	4.17	0.46					
5	Bathing suit	2.00	10.00	5.00	100	Yes	8.00	1.60	5.00	1.00					
6	jewelry	5.00	17.00	8.00	680	Yes	12.00	1.50	3.40	0.43					
7	laptop	2.00	42.00	27.00	2268	Yes	40.00	1.48	21.00	0.78					
8	Sheets	10.00	40.00	25.00	10000	No	30.00	1.20	4.00	0.16					
9	razors	3.00	5.00	2.00	30	Yes	2.00	1.00	1.67	0.83					
10	T-shirts and tank tops	12.00	30.00	20.00	7200	No	18.00	0.90	2.50	0.13					
11	Duvet	25.00	204.00	218.00	1111800	Yes	179.00	0.82	8.16	0.04					
12	Athletic gear	9.00	21.00	17.00	3213	No	12.00	0.71	2.33	0.14					
13	hair dryer	9.70	25.00	24.00	5820	No	15.30	0.64	2.58	0.11					
14	Pillow	15.00	51.00	66.00	50490	Yes	36.00	0.55	3.40	0.05					
15	dresses	10.00	23.00	26.00	5980	Yes	13.00	0.50	2.30	0.09					
16	pajamas	14.00	28.00	30.00	11760	Yes	14.00	0.47	2.00	0.07					
17	Bath robe	19.00	27.00	27.00	13851	No	8.00	0.30	1.42	0.05					
18	conditioner	10.00	13.00	15.00	1950	No	3.00	0.20	1.30	0.09					
19	shampoo	10.00	13.00	15.00	1950	Yes	3.00	0.20	1.30	0.09					
20	shoes	4.00	5.00	6.00	120	Yes	1.00	0.17	1.25	0.21					
21	toothbrush	2.00	3.00	6.00	36	No	1.00	0.17	1.50	0.25					
22	make-up	7.00	10.00	22.00	1540	No	3.00	0.14	1.43	0.06					
23	pencil case	7.00	8.00	19.00	1064	No	1.00	0.05	1.14	0.06					
24	towels	35.00	36.00	34.00	42840	No	1.00	0.03	1.03	0.03					
25	coat	15.00	15.00	3.00	675	Yes	0.00	0.00	1.00	0.33					
26	feminine hygiene products	10.00	10.00	10.00	1000	Yes	0.00	0.00	1.00	0.10					
27	Toothpaste	3.50	3.50	4.60	56.35	Yes	0.00	0.00	1.00	0.22					
28	Work Clothes	35.00	28.00	30.00	29400	Yes	-7.00	-0.23	0.80	0.03					
29	stuffed animal	22.00	16.50	20.00	7260	Yes	-5.50	-0.28	0.75	0.04					

6.0 Contextualizing and Charting Output Data:

1. Click on *Generate Statistical Analysis* Button, which will display a form consisting of two pages:
 - a) The First page is called *Statistical Analysis Page*. This displays general statistical statements about the top 5 Features, the Worst 5 Features, and some statistical statements about the relationship between the features.

The screenshot shows the FinanceBot application interface. The top menu bar includes File, Home, Insert, Page Layout, Formulas, Data, DSS Buttons, Review, View, Developer, and Help. The ribbon below the menu bar has tabs for Input Data, Calculate, Edit Current Data, Feature Benefit per Number cost per day per day, Profit, and Output Data. The main area is a spreadsheet with columns labeled A through R. A dialog box titled 'Output Data' is open, showing the 'General Information' tab. The dialog box contains the following text:

Please select the sheet and the rank you want to analyze accordingly:

☐ Profit per day
☐ Benefit per cost per day

The top 5 features according to rank 1 are ...

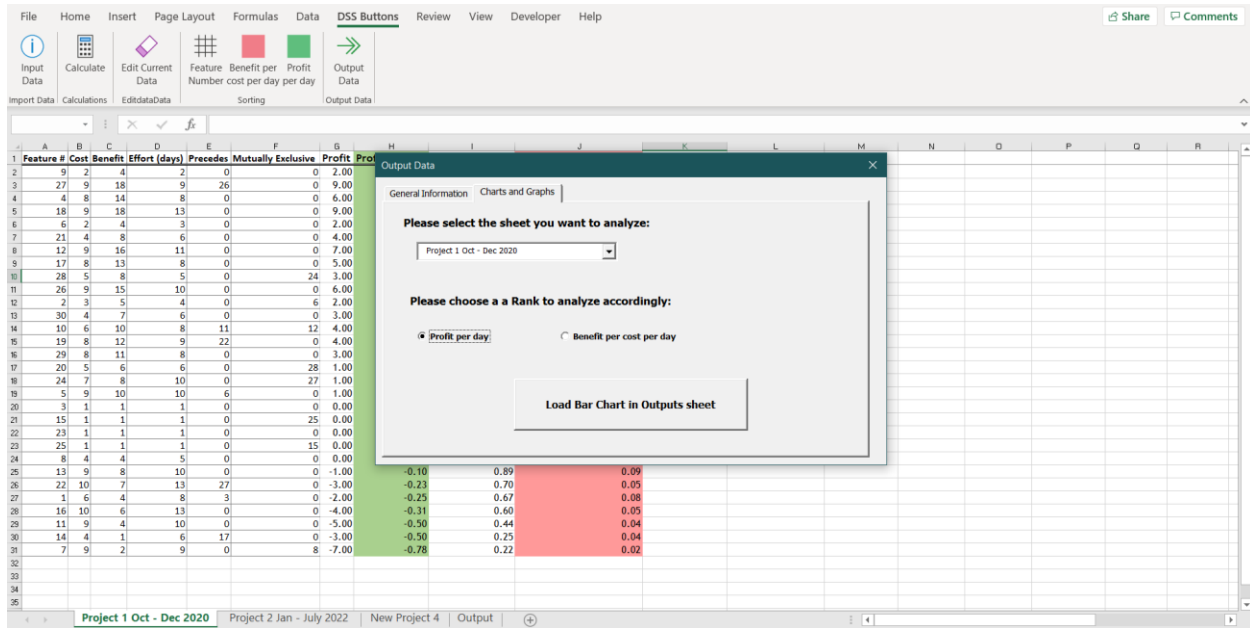
The least beneficial features are ...

Using Rank 1, you will gain 140 Benefit with 8days and 2 dollars unspent.
 So the cap efficiency is 97%

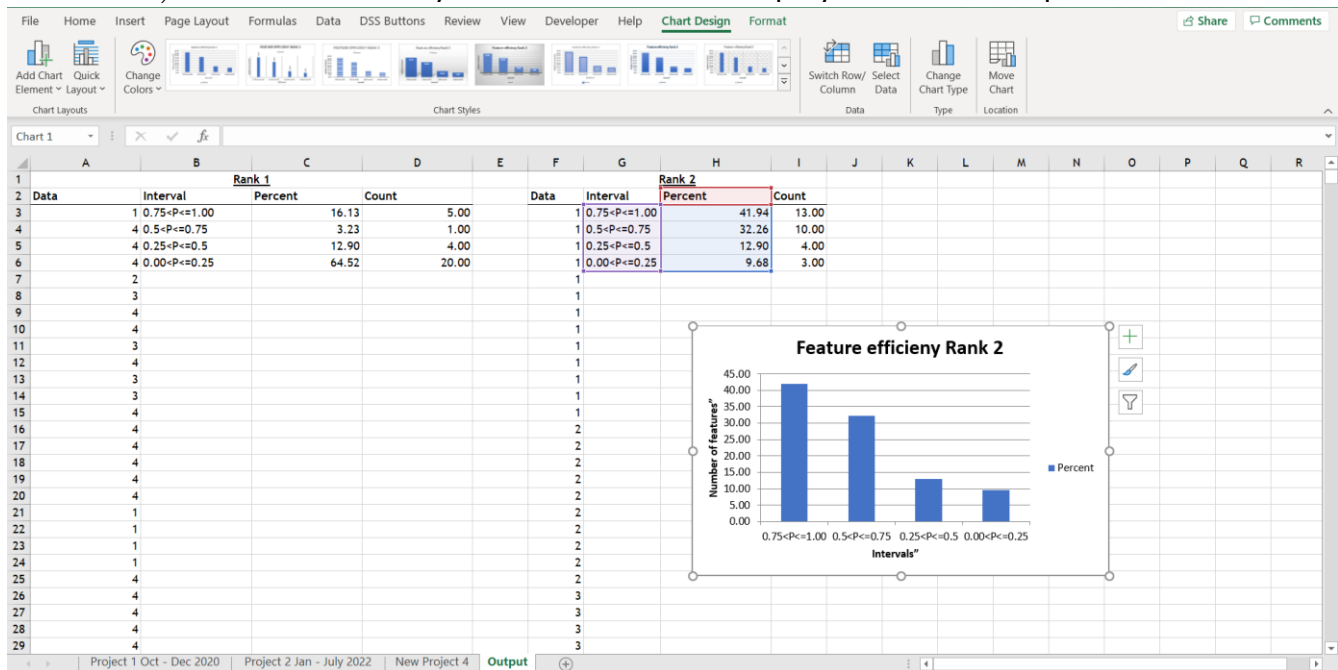
Other statistical statments ... etc.

The dialog box also shows a table of data with columns for Feature #, Cost, Benefit, Effort (days), Precedes, Mutually Exclusive, Profit, and Profit per cost per day. The data is color-coded: green for positive values and red for negative values.

- b) The second page is called *Charts and Graphs*. This allows you to generate different charts and graphs for the given input. Choose the sheet that has the data you want to analyze, then choose the chart that you want to look at from the combo box.



c) The charts that you selected will be displayed in the "Outputs" Sheet.



7.0 Edit and Sort Current Data:

7.1 To Edit Current Data, click on Edit Feature button, then:

7.1.1 To Edit a Feature's Characteristics:

1. Click on *Edit Feature Characteristics* (Page 1) from the user form.
2. Enter the Feature number you want to edit in the textbox.

3. Click on *Go to Feature* button, which will take you to the row that contains the feature number and its characteristics.
4. Manually edit the Feature's characteristics.

Feature #	Cost	Benefit	Effort (days)	Precedes	Mutually Exclusive	Profit	Profit per day	Benefit per cost	Benefit per cost per day
9	2	4	2	0	0	2.00	1.00	2.00	1.00
27	9	18	9	26	0	9.00	1.00	2.00	0.22
4	8	14	8	0	0	6.00	0.75	1.75	0.22
18	9	18	13	0	0	9.00	0.69	2.00	0.15
6	2	4	3	0					.67
21	4	8	6	0					.33
12	9	16	11	0					.16
17	8	13	8	0					.20
28	5	8	5	0					.32
26	9	15	10	0					.17
2	3	5	4	0					.42
30	4	7	6	0					.29
10	6	10	8	11					.21
19	8	12	9	22					.17
29	8	11	8	0					.17
20	5	6	6	0					.20
24	7	8	10	0					.11
5	9	10	10	6	0	1.00	0.10	1.11	0.11
3	1	1	1	0	0	0.00	0.00	1.00	1.00
15	1	1	1	0	25	0.00	0.00	1.00	1.00

Edit or Remove a Feature

Edit Feature Characteristics

Remove or Delete a Feature

Enter the feature number you want to edit in the text box below:

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Go to Feature

7.1.2 To Remove Click on Delete Feature row button

1. Click on the *Remove or Delete a Feature* (Page 2) from the user form.
2. Enter the Feature number that you want to remove in the textbox.
3. Click *OK* button, which will delete the feature after a message box appears 'Are you sure you want to delete feature #?'

Feature #	Cost	Benefit	Effort (days)	Precedes	Mutually Exclusive	Profit	Profit per day	Benefit per cost	Benefit per cost per day
9	2	4	2	0	0	2.00	1.00	2.00	1.00
27	9	18	9	26	0	9.00	1.00	2.00	0.22
4	8	14	8	0	0	6.00	0.75	1.75	0.22
18	9	18	13	0	0	9.00	0.69	2.00	0.15
6	2	4	3	0					.67
21	4	8	6	0					.33
12	9	16	11	0					.16
17	8	13	8	0					.20
28	5	8	5	0					
26	9	15	10	0					
2	3	5	4	0					
30	4	7	6	0					
10	6	10	8	11					
19	8	12	9	22					
29	8	11	8	0					
20	5	6	6	0					
24	7	8	10	0					
5	9	10	10	6	0	1.00	0.10	1.11	0.11
3	1	1	1	0	0	0.00	0.00	1.00	1.00
15	1	1	1	0	25	0.00	0.00	1.00	1.00

Edit or Remove a Feature

Edit Feature Characteristics

Remove or Delete a Feature

Enter the feature number you want to delete in the text box below:

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Delete Feature

Microsoft Excel

Are you sure you want to clear this feature row?

Yes No

7.2 To Sort Current Data:

To sort the data that is available in the worksheet, there are three sorting options that you have:

1. Sort according to feature number, this sorts the data according to the feature number in ascending order

2. Sort according to Profit per day, this sorts the data according to the profit per day in descending order.
3. Sort according to Benefit per cost per day, this sorts the data according to the benefit per cost per day in descending order.

8.0 Troubleshooting:

- All features have been tested and made error-proof
- Despite this, if there are any errors, please contact anyone from our team, and we will correct the errors

9.0 Contact details:

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10.0 References

We chose this format after understanding and defining what the user manual is. It is a document to be read by the user to understand how to use our application. So, we have optimized it for the users ease of understanding, and kept the technical jargon to a minimum

User Manual Template and Guide to Create Your Own Manual in 15 Steps. (2020). Retrieved 13 November 2020, from <https://instrktiv.com/en/user-manual-template/>