RAW DATA LIBRARY

HOW TO PREPARE AND UPLOAD YOUR OWN DATA

*Raw Data Library

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Abstract

This study considers 4 experimental raw data and a survery of dataset. **Stress-strain relationships** of **A1** and **A2, R1 python file** for distribution radar chart of Taguchi as a different variable data, and **moment-curvature relationship** of **A1** were obtained. For the current study the fifth data of **S1** was taken from a **survey dataset** of 500 responses. It is explained how the experimentally obtained raw data, code file of python and survery dataset are uploaded to the RDL platform.

Introduction

Many scientific raw data can be uploaded in **different formats.** This paper explains the process of uploading data from an **excel** file, **code file** and **survey dataset** to RDL platform.

One of the most important points is to upload the data to the RDL platform with the correct variable and sample names given in the paper.

In Figure 1; "variable name" of the **raw data** is "**stress-strain relationship** "and name of the specimen is **A1.**

Another important point is that the uploaded file names must be the same as given in the related article or report of the research project.

"Since the specimen's name of the raw data in Figure 1 is **A1**, the name of the excel file should be saved as **A1 and uploaded to the platform as A1**".

The units of data in the uploaded excel or other files must be correct.

In Figure 1, the unit for the x-axis is **mm/mm** for strain values, while it is **MPa** for the y-axis for the given stress values.

In order for other researchers who will download your data to be able to use your data ***comfortably***, excel or other file types uploaded by data owners must be ***well prepared***. Please download and review the example excel format-prepared for authors. Data owners are free to use their own excel formats, taking into account the important points mentioned in this paper.

It would be useful to upload a jpg image that gives an idea of what other researchers will have if the corresponding data or modeling files are purchased.

This requirement is called "upload preview image" in the RDL data upload system. **Preview images for the raw data** must be uploaded by the authors.

The images to be uploaded can sometimes be a **graphic image**, sometimes an image of **software code on a computer**, and sometimes an image showing a single page of an entire **survey**.

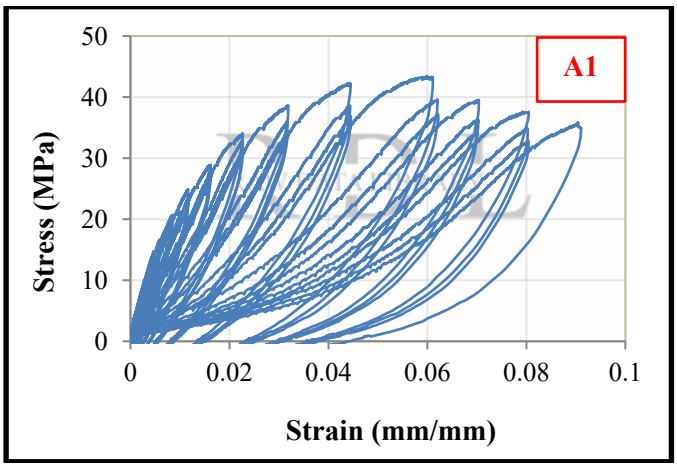

Figure 1: Stress-strain relationship of specimen A1.

- ***Authors can upload different test data for the same variable.***

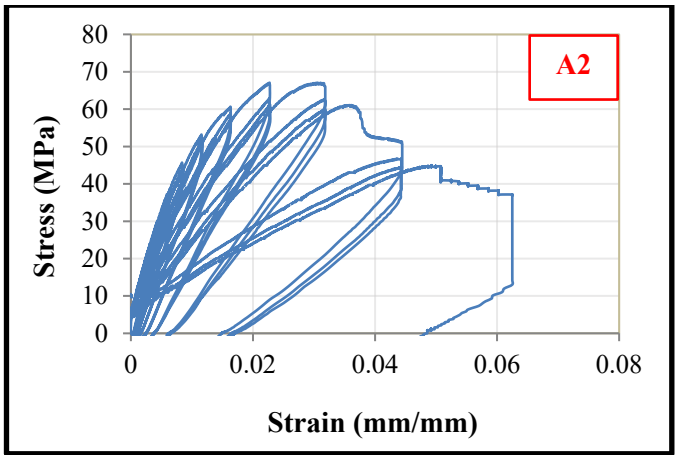

Figure 2: Stress-strain relationship of specimen A2.

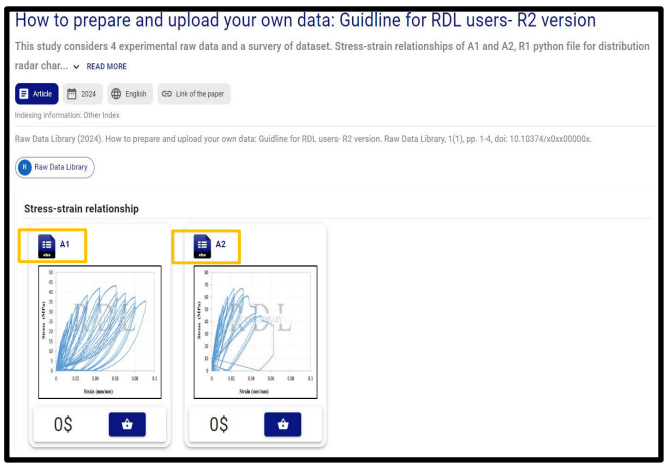

Figure 3: Uploaded stress-strain relationships of A1 and A2: Excel files with preview images.

Figure 4 represents another test variable obtained from the same study and named as R1.

For **R1** raw data of distribution radar chart of Taguchi, which is a different variable data obtained from the same study, the data owner has both the python **program file** and the raw data in the **excel file** used for the data inserted in python.

Thus, the data owner uploaded both the **python program** and **excel files** separately to the RDL platform for the outputs of **R1.**

- ***Authors can upload different test variables for the same study.***

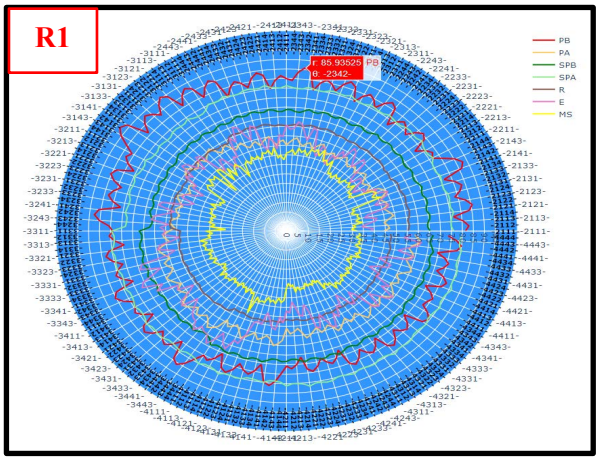

Figure 4: Radar chart distribution of R1.

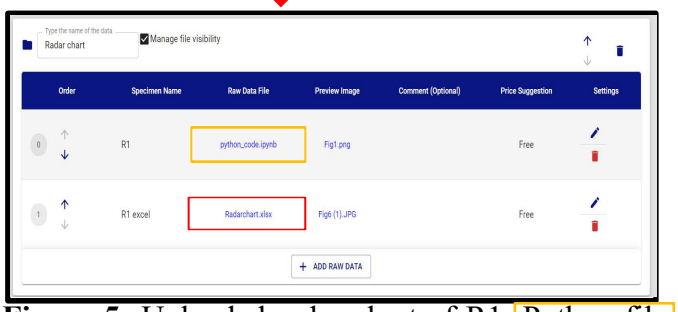

Figure 5: Uploaded radar chart of R1: Python file with preview image.

As it is shown in Fig. 5, the second data of **R1** was uploaded as excel file (Fig.6) "inserted data to python from excel" with the same preview image. Since the data transferred from excel to python, the given data in excel file are unitless.

Design	Penetration before RTFOT	Penetration after RTFOT	Softening Point before RTFOT	Softening Point after RTFOT	RTFOT Mass Loss	Elastic Recovery	Marshall Stability
-2111-	81.3627	44.3812	65.3436	76.0291	55.3284	38.5203	32.2860
-2112-	82.9648	46.9127	64.2764	74.9450	55.7160	39.3315	29.5272
-2113-	80.6385	46.1233	64.4277	74.9535	55.9260	34.2420	31.5107
-2114-	76.3402	44.6752	65.4211	75.4544	55.4184	36.5352	30.5522
-2121-	83.8770	46.6138	65.7151	76.6717	56.2296	40.6692	34.9011
-2122-	85.5295	49.2734	64.6406	75.5790	56.6232	41.5233	31.9190
-2123-	83.1320	48.4438	64.7931	75.5875	56.8368	36.1491	34.0631
-2124-	78.6996	46.9236	65.7925	76.0921	56.3196	38.5749	33.0270
-2131-	81.6602	45.6182	65.7308	75.8694	56.2236	47.6268	33.5894
-2132-	83.2697	48.2217	64.6564	74.7877	56.6184	48.6291	30.7193
-2133-	80.9348	47.4104	64.8088	74.7962	56.8308	42.3345	32.7829
-2134-	76.6193	45.9220	65.8083	75.2959	56.3148	45.1737	31.7856
-2141-	86.2537	47.1371	64.9371	75.7363	55.7532	49.3038	46.6102
-2142-	87.9529	49.8272	63.8771	74.6570	56.1432	50.3412	42.6275
-2143-	85.4865	48.9879	64.0272	74.6655	56.3544	43.8282	45.4910
-2144-	80.9287	47.4507	65.0145	75.1640	55.8432	46.7649	44.1073
-2211-	76.6070	42.1717	64.8512	76.9439	54.5436	40.6848	36.3025
-2212-	78.1156	44.5776	63.7912	75.8476	54.9264	41.5428	33.2006
-2213-	75.9258	43.8273	63.9412	75.8561	55.1328	36.1647	35.4309

Figure 6: Uploaded excel file for the data used in python program.

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The uploaded fourth data from the same study is **moment-curvature relationship of A1** specimen as a different data.

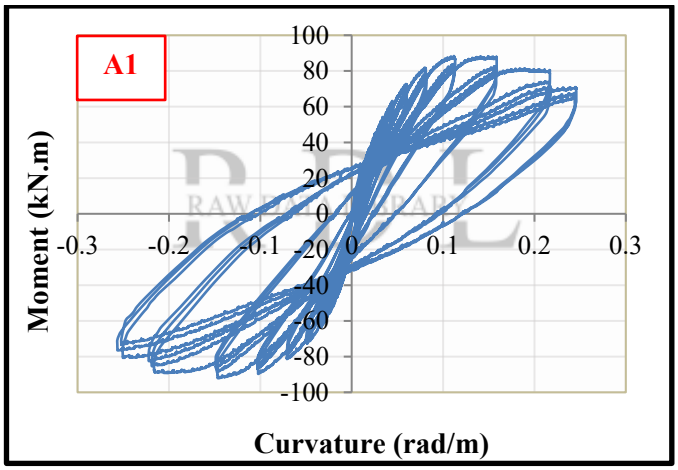


Figure 7: Moment-curvature relationship of A1.

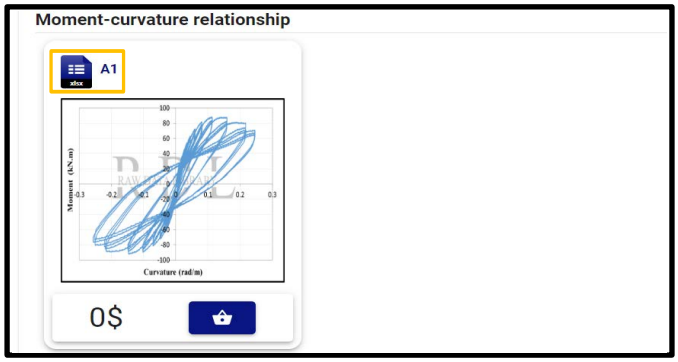
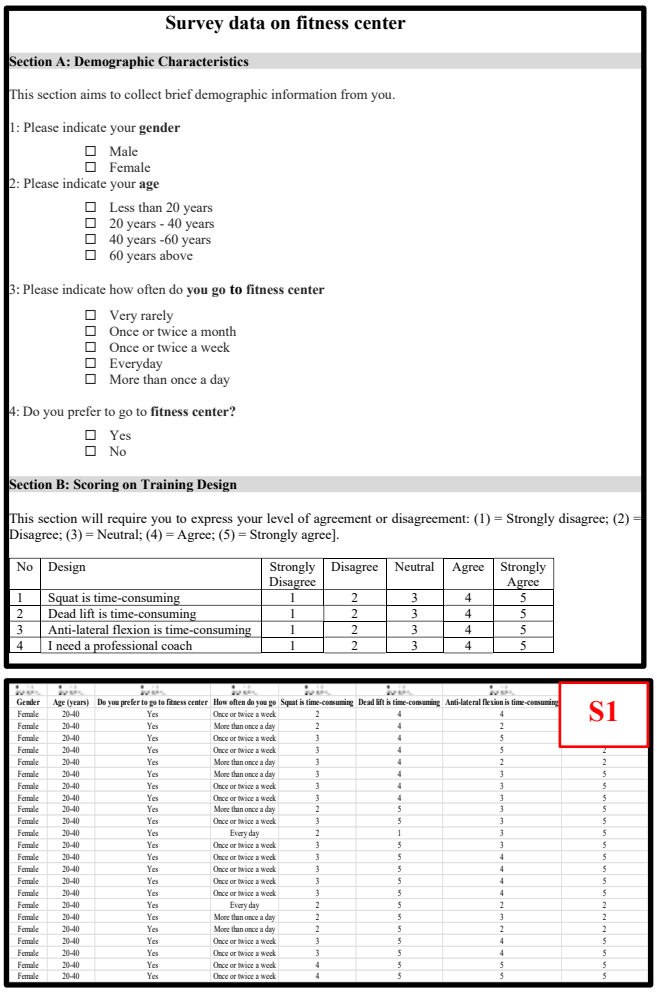


Figure 8: Uploaded moment-curvature relationship of A1: Excel file with preview image.

In Figure 9, the uploaded fifth data is from a **survey dataset.** The survey data set was carried out on 500 responses of the participants.



Survey data on fitness center

Section A: Demographic Characteristics

This section aims to collect brief demographic information from you.

1: Please indicate your **gender**

- ☐ Male
- ☐ Female

2: Please indicate your **age**

- ☐ Less than 20 years
- ☐ 20 years - 40 years
- ☐ 40 years -60 years
- ☐ 60 years above

3: Please indicate how often do **you go to fitness center**

- ☐ Very rarely
- ☐ Once or twice a month
- ☐ Once or twice a week
- ☐ Everyday
- ☐ More than once a day

4: Do you prefer to go to **fitness center?**

- ☐ Yes
- ☐ No

Section B: Scoring on Training Design

This section will require you to express your level of agreement or disagreement: (1) = Strongly disagree; (2) = Disagree; (3) = Neutral; (4) = Agree; (5) = Strongly agree].

No	Design	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Squat is time-consuming	1	2	3	4	5
2	Dead lift is time-consuming	1	2	3	4	5
3	Anti-lateral flexion is time-consuming	1	2	3	4	5
4	I need a professional coach	1	2	3	4	5

Gender	Age (years)	Do you prefer to go to fitness center	How often do you go	Squat is time-consuming	Dead lift is time-consuming	Anti-lateral flexion is time-consuming	
Female	20-40	Yes	Once or twice a week	2	4	4	
Female	20-40	Yes	More than once a day	2	4	2	
Female	20-40	Yes	Once or twice a week	3	4	5	
Female	20-40	Yes	Once or twice a week	3	4	5	2
Female	20-40	Yes	More than once a day	3	4	2	2
Female	20-40	Yes	More than once a day	3	4	3	5
Female	20-40	Yes	Once or twice a week	3	4	3	5
Female	20-40	Yes	Once or twice a week	3	4	3	5
Female	20-40	Yes	More than once a day	2	5	3	5
Female	20-40	Yes	Once or twice a week	3	5	3	5
Female	20-40	Yes	Every day	2	1	3	5
Female	20-40	Yes	Once or twice a week	3	5	3	5
Female	20-40	Yes	Once or twice a week	3	5	4	5
Female	20-40	Yes	Once or twice a week	3	5	4	5
Female	20-40	Yes	Once or twice a week	3	5	4	5
Female	20-40	Yes	Every day	2	5	2	2
Female	20-40	Yes	More than once a day	2	5	3	2
Female	20-40	Yes	More than once a day	2	5	2	2
Female	20-40	Yes	Once or twice a week	3	5	4	5
Female	20-40	Yes	Once or twice a week	3	5	4	5
Female	20-40	Yes	Once or twice a week	4	5	5	5
Female	20-40	Yes	Once or twice a week	4	5	5	5

Figure 9: Responses for survey dataset of S1.

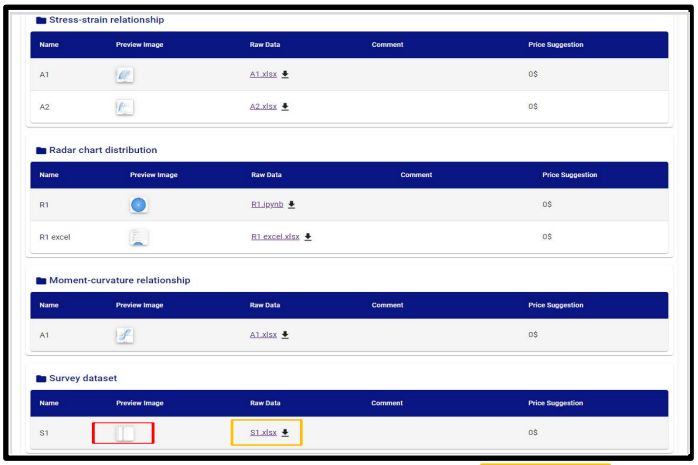


Figure 10: Uploaded survey dataset: Excel file with preview image.

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Conclusion

Researchers have been having difficulty obtaining data for many years for various reasons. Sometimes they repeated similar experiments for the same parameters.

Raw data are needed in order for the articles obtained from scientific studies to be sustainable and for the validation and comparisons of previously obtained data to be evaluated with different parameters. Thanks to the convenient and easy access of other researchers to previous data, the repetition of similar experimental parameters can be prevented.

The new face of the academy**,** RDL, emphasizes that science is no longer just between two points and the importance of preventing the repetition of similar experimental parameters.

For the current study, 5 data was considered, and the test results can be summarized as described below:

Thanks to Access to **Raw Data Library,**

- Prevention of repetition of similar experimental test parameters, direct access to analytical modelling using software programs and questionary survey forms.
- Duplication of experiments can be avoided,
- Testing less number of experimental samples,
- Experimental studies can be completed with less budget,
- More discussion opportunities and the development of more empirical or analytical models,
- More citation opportunities
- Easy validations of previous data,
- Sharing of other data mentioned but not presented in the article,
- Access to modelling of FEM, ABAQUS, ANSYS, SAP 2000, Solid Works and other computer modelling files,
- Reducing sample size and total number of participants for questionary surveys.

Acknowledgement

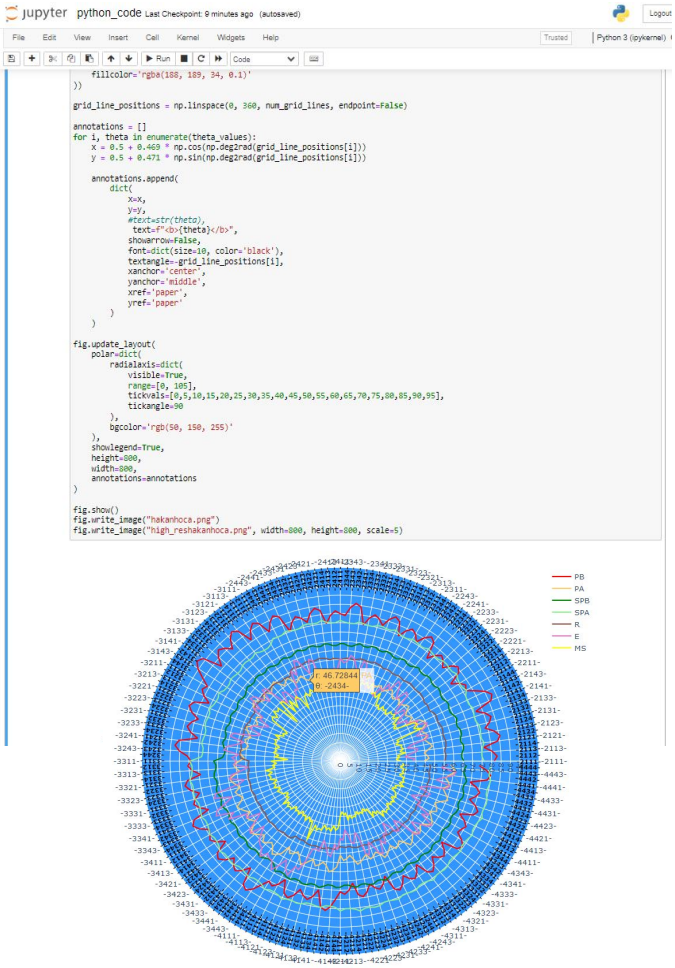
We are extremely grateful to the academics who contributed to the establishment of the Raw Data Library.

We would like to thank all the researchers who have contributed to the development of science by spending time preparing their data for use by other researchers.

RDL company continues on its way by determining the basic needs and requirements in all Research &Development studies by consulting with academicians.

References

Raw Data Library (2024). How to prepare and upload your own data. Journal of Raw Data Library, 1(1), pp. 1-4, doi: 10.1039/x0xx00000x.

Appendix

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