



Lego Inventory Creation

Report

Module: Applied Statistical Data Analysis

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1. Overview

This week's task is a Lego Inventory Project. The following will show how we created an organized system to help manage our collection of bulk Lego pieces. We developed a table (Google Spreadsheet) to keep track of our current and maybe future Lego pieces - find them quickly and know what we have. It's designed to support any kind of project, from small personal builds to large-scale projects which require specific kinds of Lego pieces.

Total number of Lego pieces: 110

Total number of types of Lego pieces: 11

Number colors: 33

2. Categories

Before starting with adding content to our inventory list, we needed to decide on what specifications or categories we wanted to classify the Lego pieces. We landed on eight different categories.

1. Element-ID

The Element-ID is a unique identifier assigned to each specific variation of a Lego piece by Lego. It roughly represents the design and its color of the piece.

2. Design-ID

The Design-ID refers to the design and shape of a Lego piece regardless of the color.

3. Piece Name

The piece name is used to describe a Lego piece. The name usually describes the shape (i.e. a brick, slope, rim etc.) and what dimensions it has. The "List of Bricks" from the Lego Universe Fandom Wiki, the Lego website as well as a quick google search helped during the identification of each Lego piece.

4. Type

In the type column we categorized the Lego pieces into higher-level types such as bricks, duplo bricks, plates, roof tiles, tyres, rims and accessories.

5. Size

The size or dimensions of a Lego Piece are specified by how many studs the Lego piece has. Studs are the round bumps on most Lego pieces. (The size of a Lego piece is not specified if there are no studs on the specific piece.)

6. Category

By category, we mean functional or thematic grouping such as Basic, Architectural and Transportation.

7. Color

Here, we specify the color of each Lego piece. Since we couldn't find an official Lego color palette (at first) or match the Lego pieces to exact HexCodes, we decided to name the different types of colors ourselves. Later, we tried to find the closest hex codes we could identify visually. (This approach is only accurate within our system of Lego pieces. New Lego pieces (at least their color) can only be named by referencing other Lego pieces we have already named.) However, later we found the color names Lego uses on their website and tried to match them to our names. Thus, we technically have nine categories.

8. Quantity

As the column headline also suggests, here we indicate how many pieces we have that match the description.

3. Process

First, we divided all bricks into groups and organized all Lego pieces that had the same shape together. Then, we started with one group of Lego pieces and began filling out our spreadsheet columns for each piece. The Lego Universe Fandom Wiki as well as the Lego website were both very helpful while identifying each piece and collecting the correct data. After completing one group, we moved on to the next group, continuing this process until we had listed all our Lego pieces. Finally, we added not only the color names for each piece but also added the shade of color as the background color for each column.

4. Result and Conclusion

The development of a detailed inventory database improved the organization, making it easier to manage our bulk Lego pieces. It will make it easier to manage our inventory, generate building plans and hopefully reduce the time spent searching for a specific type of Lego piece. Therefore,

we also added the filter option to each column. In this way, the project and our final result (Google spreadsheet) contributes to a better resource optimization. However, we also acknowledge that our spreadsheet also has limitations. For instance we couldn't find every Element-ID for each Lego piece or couldn't specify the swords by referencing the studs (because they don't have any). Therefore, there is also data missing in this spreadsheet.

References

<https://www.lego.com/de-de/pick-and-build/pick-a-brick>

https://legouniverse.fandom.com/wiki/List_of_Bricks

https://docs.google.com/spreadsheets/d/1rFe2ddoyUtCDevAyj3BCOIJzvFLZuWNdcRqeE0b_3qk/edit?usp=sharing