README

cocobot_diagram.js and associated files are a d3.js project meant to display an interactive diagram and 2 heatmaps visualizing data from the results of the CoCoBot study.

Usage

You will need to clone the repository from https://github.com/UlyssesLin/CoCoBot_Diagram then pull the index.html file into your browser as a tab. You can also choose to use Visual Studio Code to "Go Live".

If you do not know how to use Git or GitHub, you may email Ulysses Lin at utemoc@gmail.com for a .zip of the files needed, along with further instructions.

If you opt to use index.html in your browser, any alterations made will only show up after refreshing the page.

Interactive Diagram

Researchers can interact with the first diagram by selecting various filters at the top, including "Asian", "Income Under $80K", and "Care Receiver Under 30". Multiple filters can be selected at the same time. By default, the "Count by Person" radio button is selected; count by person indicates that the numbers in the diagram represent count of individuals, whereas count by instance means the numbers represent count of instances (a single emotional response). To deselect all filters, simply click off into the white margins.

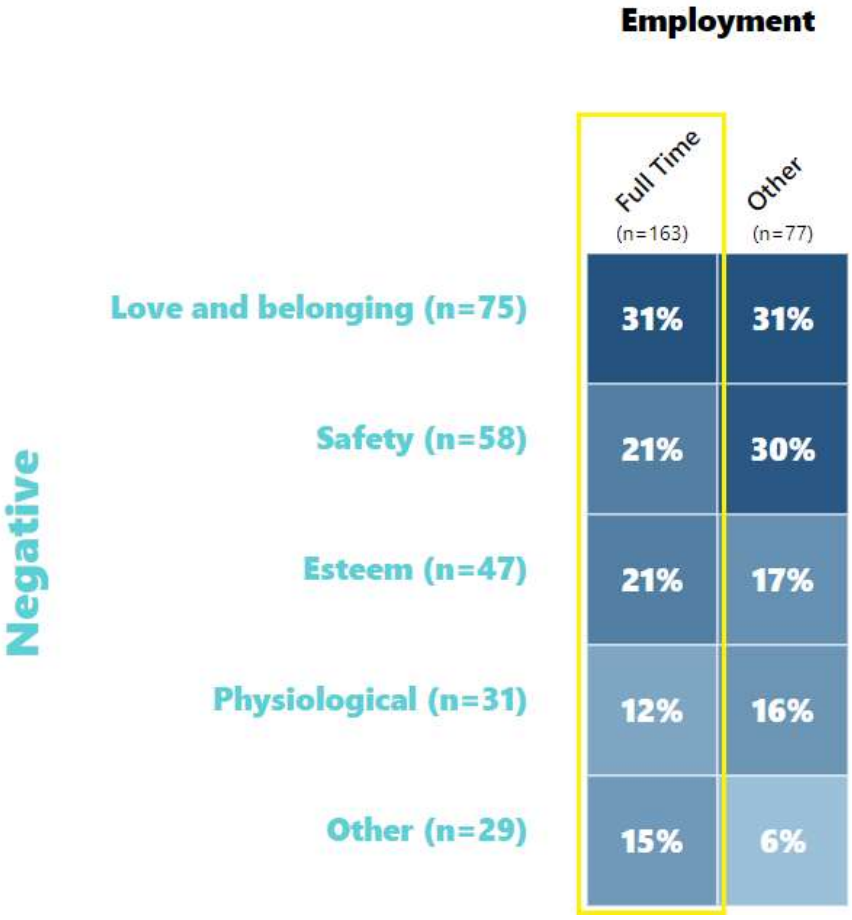
There are four columns of rectangles in the interactive diagram: negative subcategories, negative categories, positive categories, and positive subcategories. The rectangles represent the top 5 reported categories (love and belonging, safety, etc.) and their heights indicate relative counts for those categories. The subcategory rectangles correspond to their respective category rectangles; these subcategory rectangles contain subcategory text indicating the breakdown of their respective category. Note that sum of counts of a given subcategory rectangle when in count by person mode will *not* necessarily add up to the main category rectangle count; this is possible because individuals can report events in multiple subcategories and are thus counted in multiple subcategories. Also note "Other" subcategories exist as a conglomeration of subcategories that are too short in height on their own to be legible and thus are grouped.

You may click on the main negative/positive rectangles when none of the filters (aside from "Count by Person") are selected. Doing so enters the diagram into **Correlation Mode**. For example, assuming count by person is active, clicking on negative Love and belonging's rectangle triggers an animation hiding subcategory rectangles, and shortens the other main rectangles. These rectangles now show counts of individuals that reported negative Love and belonging that also reported each of these other categories. So, if positive Love and belonging shows "(75)", that means 75 people that reported negative Love and belonging also reported positive Love and belonging.

To return the diagram to its initial visual state, simply **click off into the white margins**. If this does not return the diagram to its initial visual state, refresh the page. If you have clicked on a main rectangle to enter into Correlation Mode, it is best to click off into the white margins first then click onto another rectangle, instead of clicking from rectangle to rectangle in Correlation Mode.

Heatmaps

The first heatmap (below the interactive diagram) compares demographic information against the top 5 emotion categories, counting by person. The second heatmap is similar in concept, but explores demographic combinations, such as “Non-Asian Earning $80k+”.



To interpret the heatmaps, look primarily at the columns for a given emotion. For example, take the above screenshot with added yellow rectangle highlight. Here we are indicating that for the individuals that reported negative emotions that also had full-time employment, 31% reported Love and belonging, 21% reported Safety, etc. The percentages for a given column for a single emotion (negative/positive) add up to 100%.

You may hover over any square to reveal the actual individual count over the total count for that column in the **upper left corner of the heatmap area**.

Altering Data

Currently the cocobot_diagram.js file uses .csv files hosted on GitHub; the interactive diagram uses https://raw.githubusercontent.com/UlyssesLin/CoCoBot_Diagram/master/all_data_old.csv and the heatmaps use https://raw.githubusercontent.com/UlyssesLin/CoCoBot_Diagram/master/coco-demographics.csv.

If you need to make alterations to the data, you will need to alter the .csv file(s) in your local cloned folder in Excel, then change line 9 shown below to equal false in order to use your local changes instead of GitHub data.

```
var USE_GITHUB_DATA = true, // SET THIS TO FALSE TO USE LOCAL .CSV FILE DATA
INSTEAD OF GITHUB HOSTED .CSV FILE DATA
```

If you renamed files or used new ones, you must ensure that your local file names match that of the referenced file locations on lines 11 or 13, respectively.

Notes

- Any “Ambiguous” emotional responses have been left out
- Some responses do not have categories if they have not been categorized in the AMIA2022_Table file, and are categorized simply as “Other”
- Responses with no ID or “Tester” as ID have been left out