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Visualizing the 11th International Classification of Diseases

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Abstract

We designed and implemented an interactive artistic data visualization of the 11th International Classification of Diseases (ICD-11). Our visualization primarily showcases the structure of the ICD-11, showing how the different codes fall into the main disease categories (chapters) and subcategories. This is our preliminary approach in the design and study of artistic visualizations for exploring the ICD-11, as well as aid in its awareness campaign.

The Visualization

Data visualization, or the use of interactive, visual representation of data has been shown to help people explore and understand data. Hence, we developed a visualization for browsing and exploring the ICD-11.

We designed a visualization similar to tree visualizations which shows the hierarchy of ICD-11 codes into categorical groupings and subgroupings. Each category is shown as a circle, and its subcategories as smaller circles within it. The size of the circles corresponds to the amount of codes the category has.

When a person browses using our visualization, they first see the top 26 chapters of the ICD-11. For example, Chapter 6 – Mental, Behavioural or Neurodevelopmental disorders is shown highlighted here.

You can preview the subcategories of a group by hovering over the smaller circles in it.

You can explore the contents of a group by clicking on it.

As you go deeper into the hierarchy, the groups on the upper layers get visualized on the side. The current group is marked with a black border.

The individual codes in a group are labelled with their code and cannot be clicked further.

Future Work

This project is a work-in-progress and we are thinking of ways of how to improve it. First, we would like to explore linking it with another data sources (e.g., the Global Burden of Disease Study) to show how the ICD-11 relates to them. For example, rather than having the size of the circles show the amount of codes in a disease group, it can visualize the prevalence of that group within a population instead.

Next, we want to develop story-telling techniques and incorporate them into the visualization to help people understand what the ICD-11 is all about.

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