

CSE512-A3 Storyboard

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Data Domain

The dataset we selected for this assignment is the `Prestige` data containing 102 rows and 6 columns from `car` package in R, which describes the prestige of 102 Canadian occupations in 1971. <http://svitsrv25.epfl.ch/R-doc/library/car/html/Prestige.html> The `Prestige` data contains the following columns:

- `education`: Average education of occupational incumbents, years, in 1971.
- `income`: income Average income of incumbents, dollars, in 1971.
- `women`: Percentage of incumbents who are women.
- `prestige`: Pineo-Porter prestige score for occupation, from a social survey conducted in the mid-1960s.
- `type`: Type of occupation. A factor with levels (note: out of order): bc, Blue Collar; prof, Professional, Managerial, and Technical; wc, White Collar.

Our overall goal is to develop a visualization that

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We use the parallel coordinates design as a centerpiece for our visualization. Figure 0.1 shows brushing in parallel coordinates and the color encoding of types of jobs. We chose three colors to encode the nominal job type, but also want to use lumens to encode the values of any one continuous variable, if any is selected. The brightness should be the same for any one data point (or occupation), and helps to show trends of correlations. Figure 0.2 demonstrates reordering of axes to support visualization of correlations between pairs of variables.

Brushing

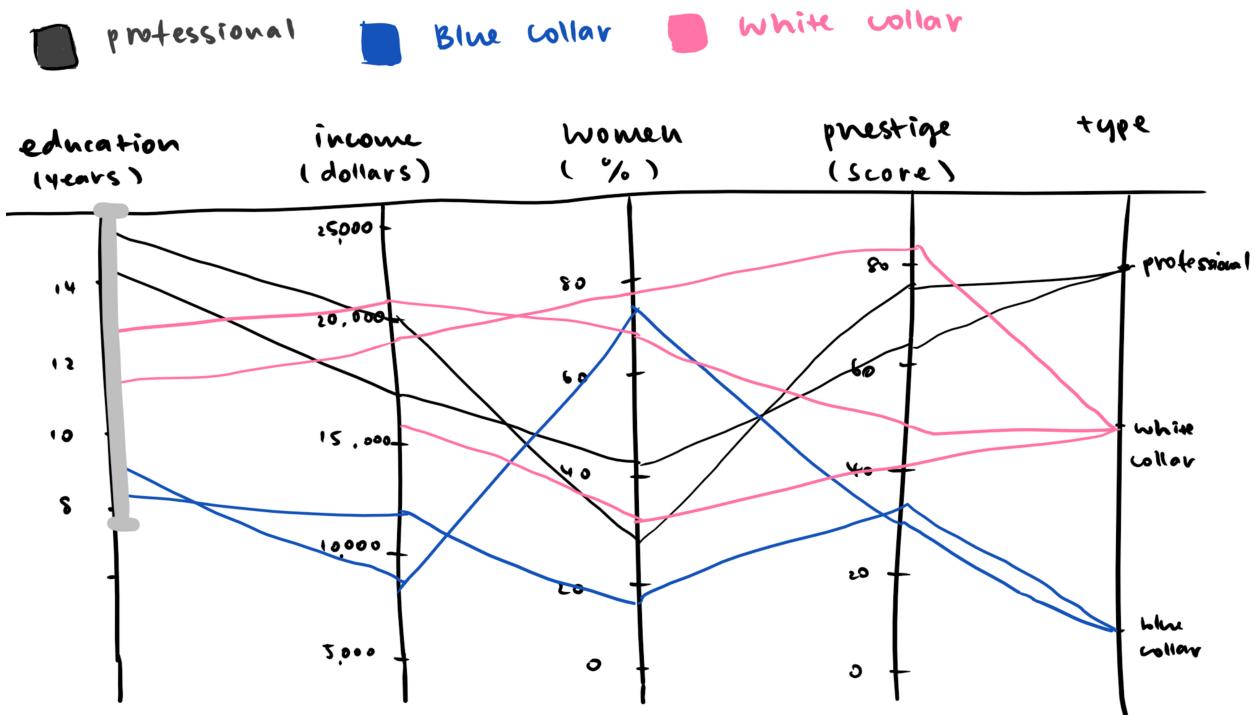


Figure 0.1: Parallel coordinates design with brushing.

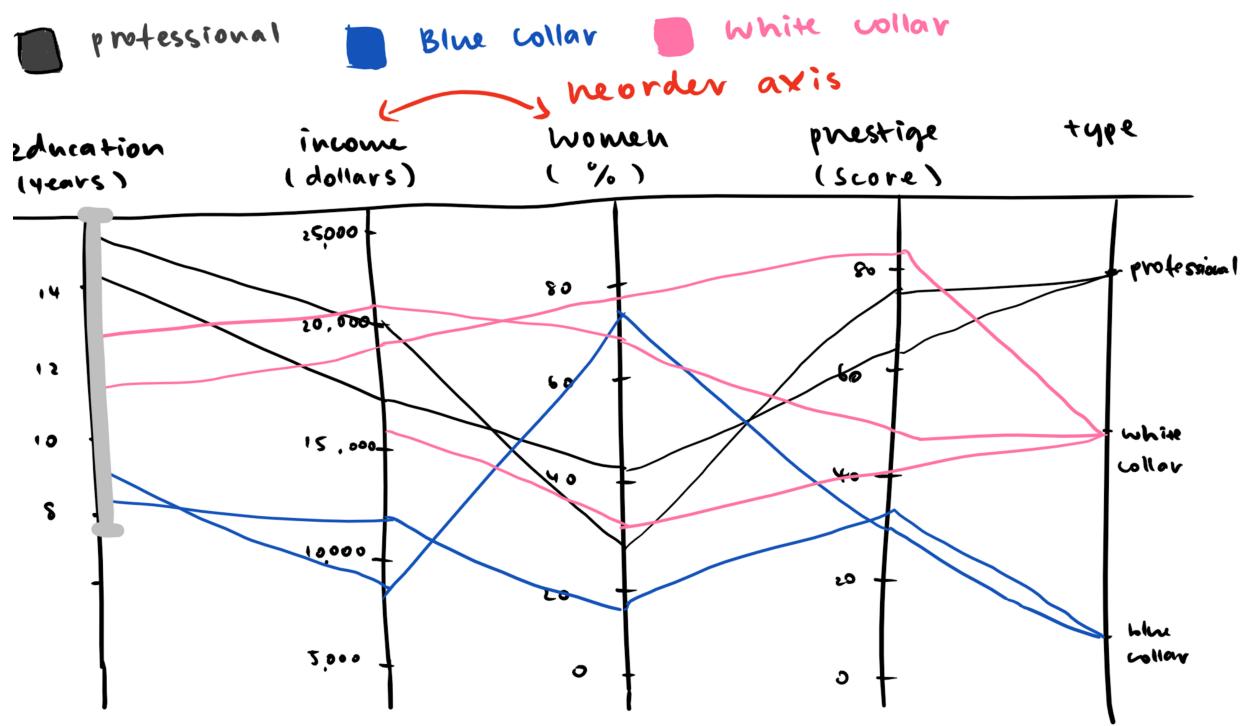


Figure 0.2: Reordering of axes.

The bottom half of our design shows the actual data set, including the name of the occupation and actual values of each variable. We want to initialize the data frame with occupation names sorted alphabetically. Figure 0.3 shows the search bar being used to search for occupations. We also want to add sorting to every quantitative variables. One or more rows can be selected for highlighting in the parallel coordinates plot, either by hovering or clicking.

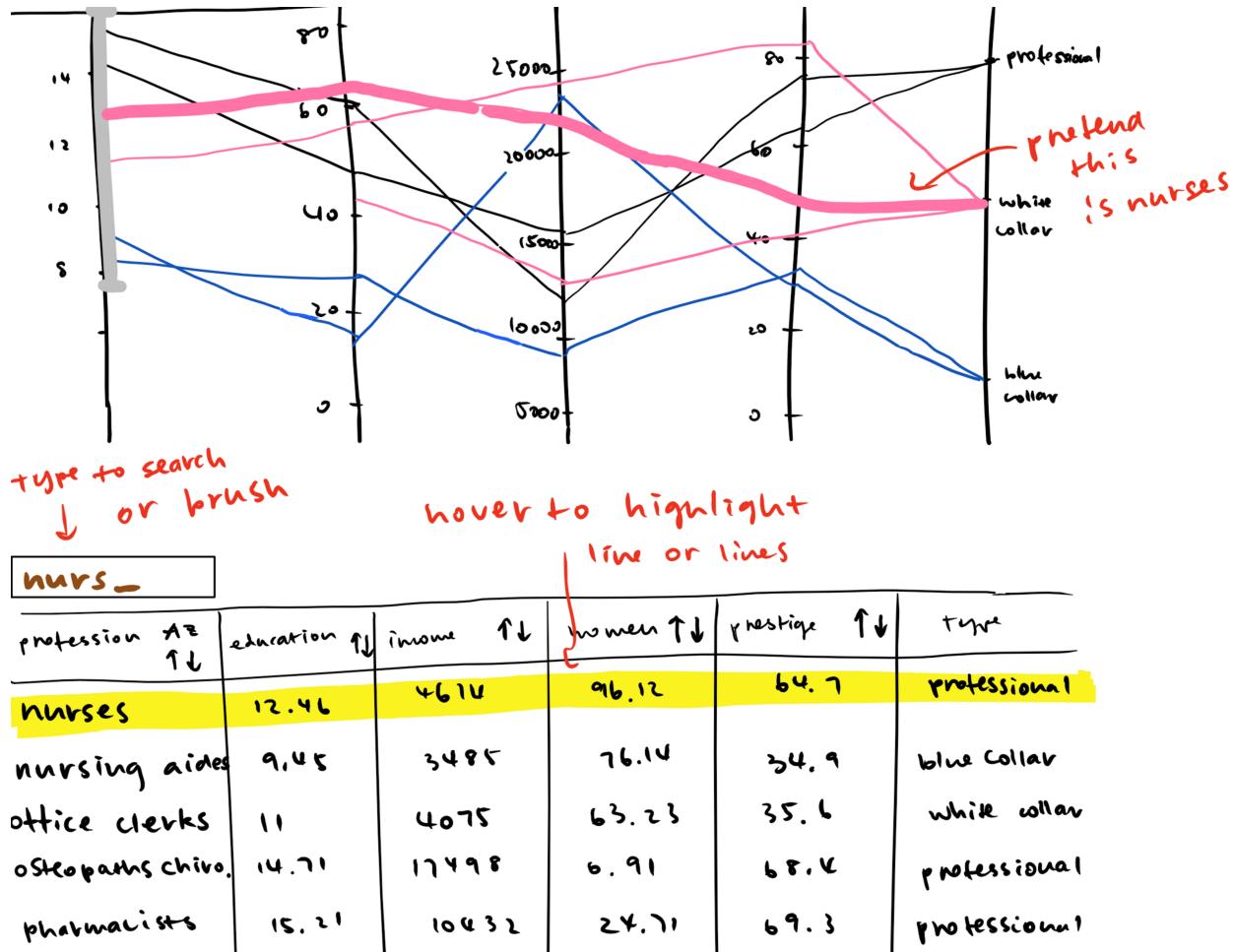


Figure 0.3: Interaction with data frame.

Figure 0.4 shows the top half interacts with the bottom half by only showing data selected by brushing. Hovering over a line on the top half should show a text box of the name of the occupation, which can then be used to search for the entire data entry.

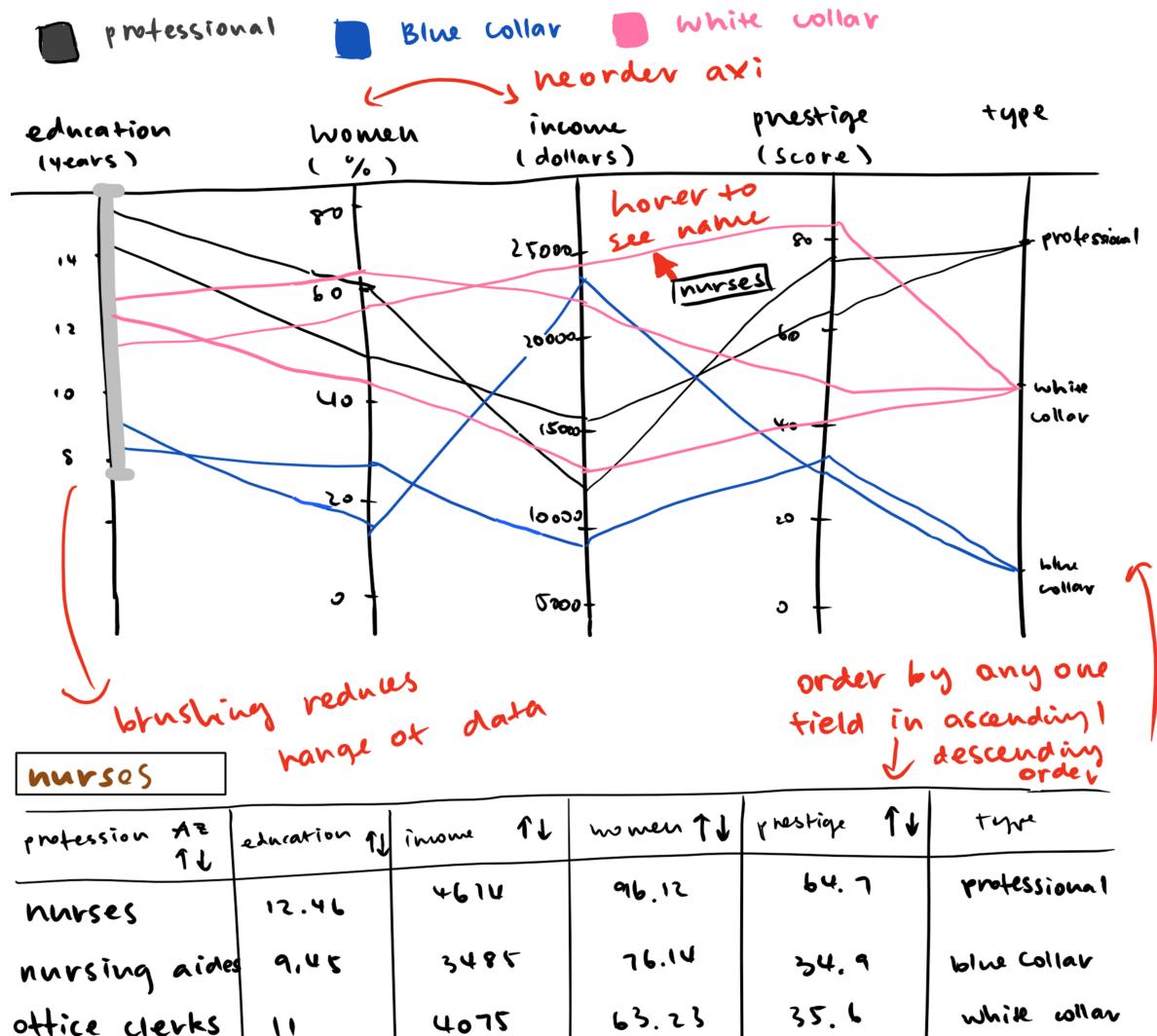


Figure 0.4: Interaction with parallel coordinates.