Data Processing
Reading 4 Questions

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1. Yahoo Maps vs Google Maps

1. Both maps look very much alike. Screenshots of a search for Harvard University in both maps are included in the appendix. For this part, see Figures 1a and 1b. Both maps provide schematic drawings of buildings on the campus. Also the paths between the many buildings are drawn. In Yahoo Maps these schematics are drawn in much less detail than in Google Maps. Therefor, the buildings in Yahoo are harder to search for visually than in Google Maps. Whereas in Yahoo Maps the buildings are represented as not much more than a plain rectangle, in Google Maps they can take on three-dimensional properties which make it easier to recognize them. Also, because of the greater contrast of building colours and "background" colours in Google Maps, the buildings are more distinct than in Yahoo. So the visual distinctness in Google Maps is bigger than in Yahoo maps.

2. Both maps visualize the route by highlighting the track with a distinct blue colour (see Figures 2a and 2b). In Yahoo Maps the map includes many rectangular shapes, representing buildings. This might be distractive for the user when reading the map. Also, in Yahoo Maps, the visual distinctness of the colours chosen to represent the roads and the background is much lower than in Google Maps. Therefor I find Google Maps more effective for visualizing routes.

3. For me Google Maps is the overall better visualization: the colours are warmer than in Yahoo, which makes the map more attractive to read. Also, it contains more information. In Figure 1a and 1b, for example, many icons are included with the university buildings. This makes it easier for the user to find what he/she is looking for.

2. Yahoo Maps vs Google Maps

1. See figure 3a. This X-ray of a person's hand shows why rainbow color map visualization often is misleading. First of all the visualization is somehow confusing because ordering the spectral colours perceptually isn't so straightforward. It is obvious that red means high intensity, but the greenish/cyan regions in the image are hard to interpret. Therefor it slows down user tasks. More importantly is the dark red area at the wrist (where the arrow is drawn), which suggests a depression there, which isn't actually present.

2. A better way to represent this image would be on a gray-scale colour map, as in figure 3b.

Appendix

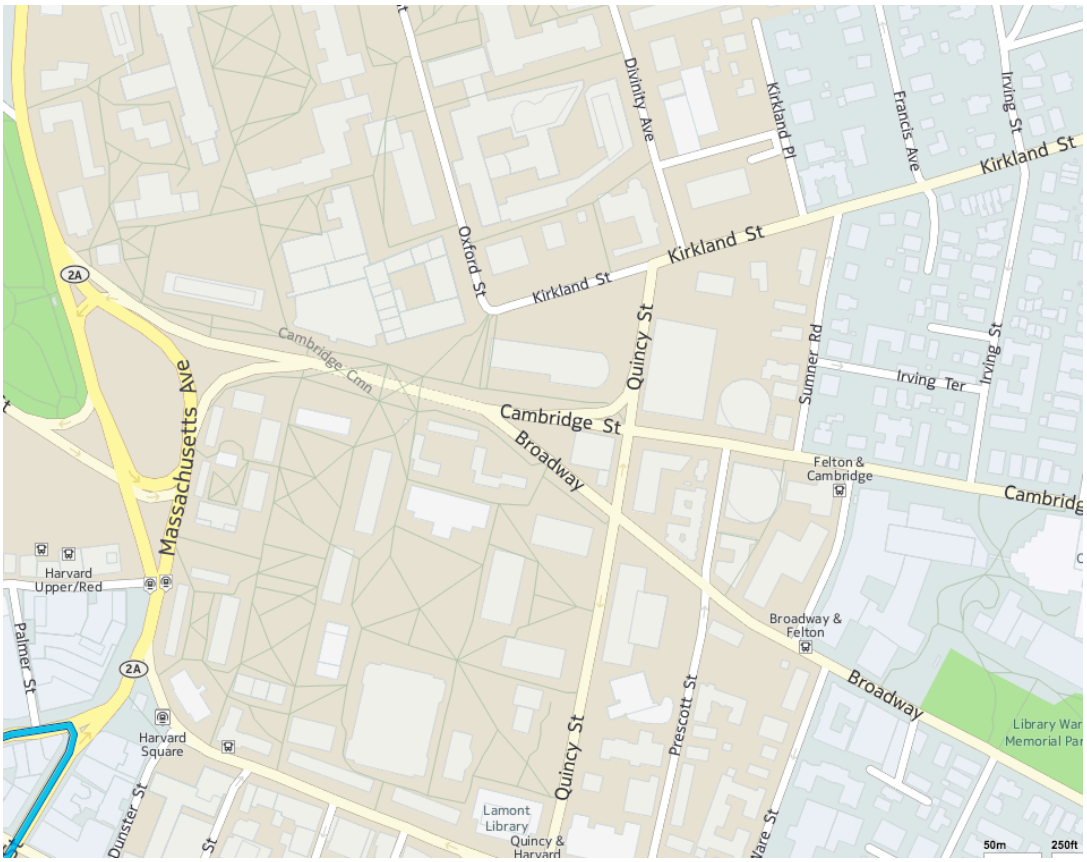

Figure 1a: Harvard University in Yahoo Maps

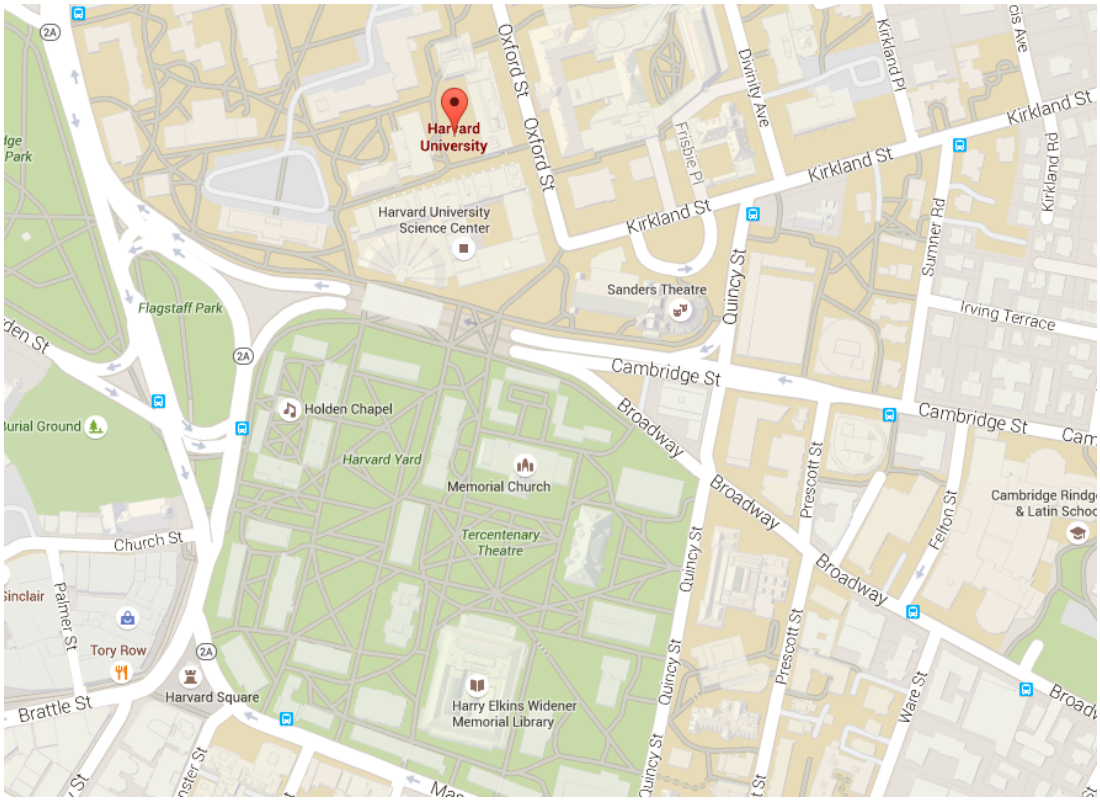

Figure 1b: Harvard University in Google Maps

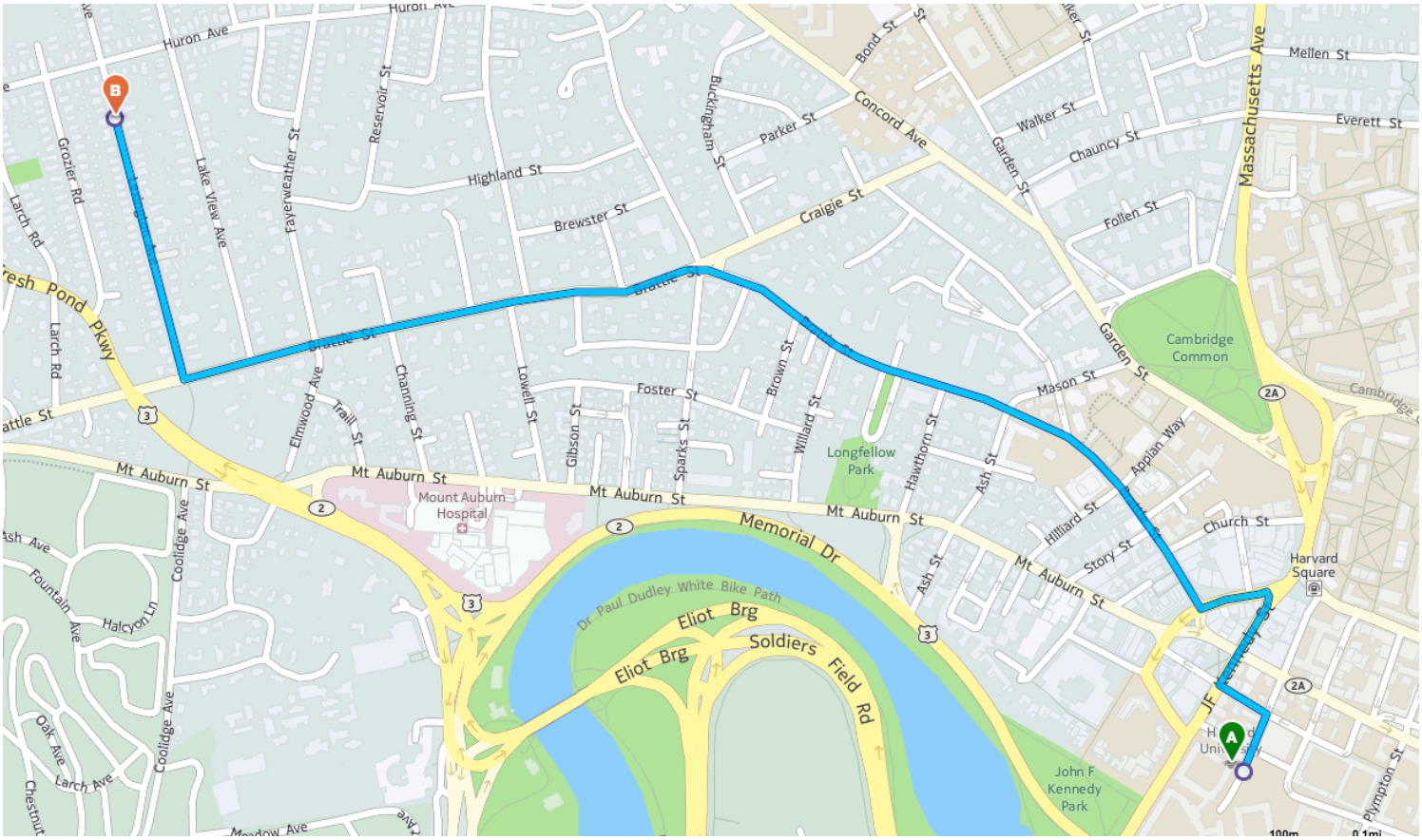

Figure 2a: route visualization in Yahoo Maps

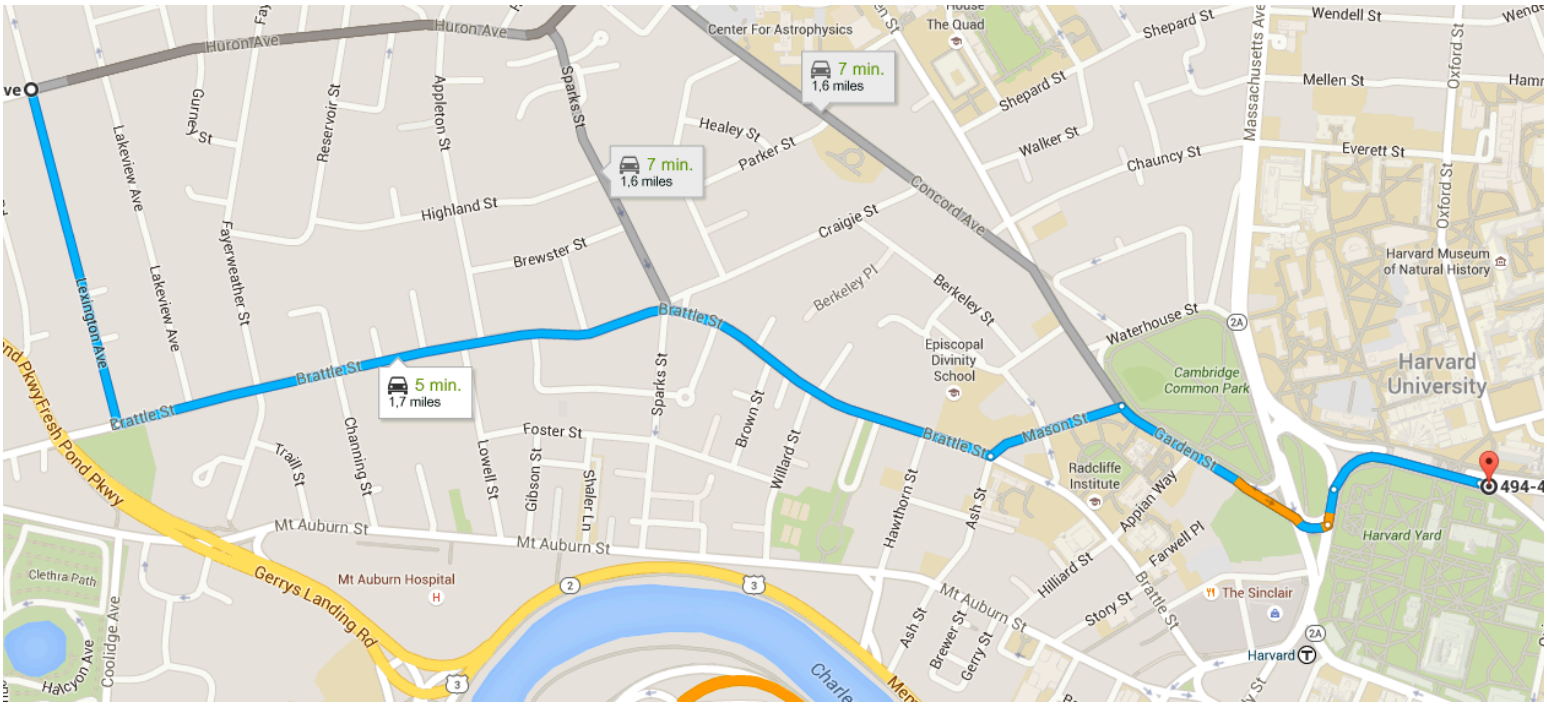

Figure 2b: route visualization in Google Maps


Rainbow color map visualization (Figure 3a, left) and gray-scale colour map visualizastion (Figure 3b, right) of an X-ray