

Approachable analytics for indirect SAS users

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Introduction

SAS's Visual Analytics software products, including the Visual Analytics Explorer (VAE) and Visual Analytics Designer (VAD), generate a wide range of visuals intended to communicate information and insights gleaned from large datasets in an understandable and appealing manner. Data analysts use these visuals to produce reports that they share via the SAS Visual Analytics Viewer with “indirect users” (i.e., those individuals who utilize the data represented in the reports but do not use the software, itself) who must understand and act on this information.

Project Scope

The scope of our project is to assess the understandability and emotional quality of the existing SAS reports as perceived by indirect SAS users, and to develop a more approachable prototype.

Project Phases

The project was divided into two primary phases. In Phase 1, one SAS report (Disease Management) was chosen as candidate for our evaluation (Figure 1 & 2).

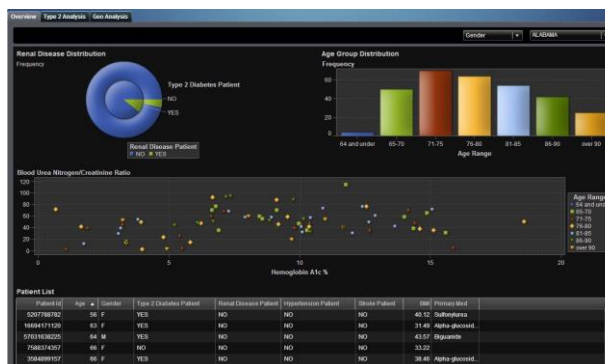


Figure 1: Overview Tab

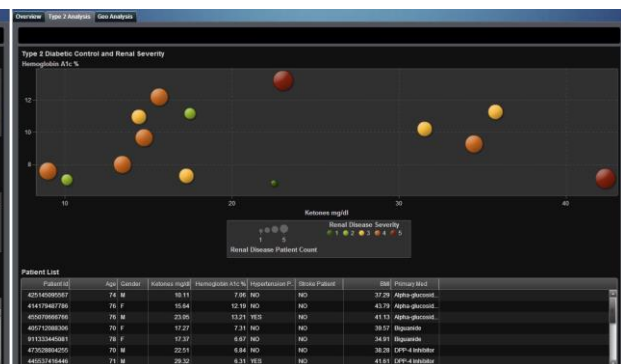


Figure 2: Diabetes tab

Participants were chosen using purposive and convenience sampling, and were asked to evaluate the report using Google forms for its hedonic quality (aesthetics), emotional approachability, and understandability. It was observed that while the existing reports were aesthetically appealing (Figure 3), participants often struggled to use the reports efficiently (Figure 4). It was also observed that the reports had moderate to low emotional approachability (Figure 5, 6, 7 & 8).

During Phase 2 of the project, we started with sketching and prototyping based on the feedback we received from the participants. We followed the process of iterative prototyping where we first created pencil sketches (Figure 9), then UI mockups, and finally created polished prototypes (Figure 10) using professional tools.

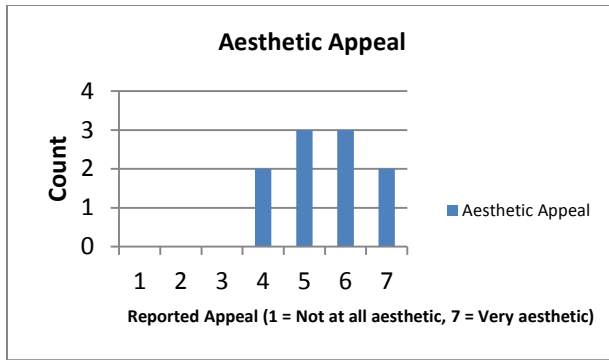


Figure 3

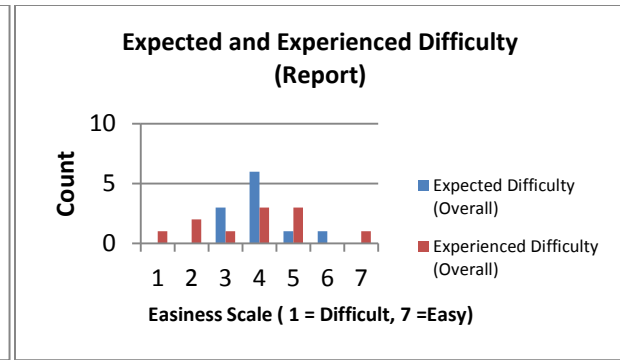


Figure 4

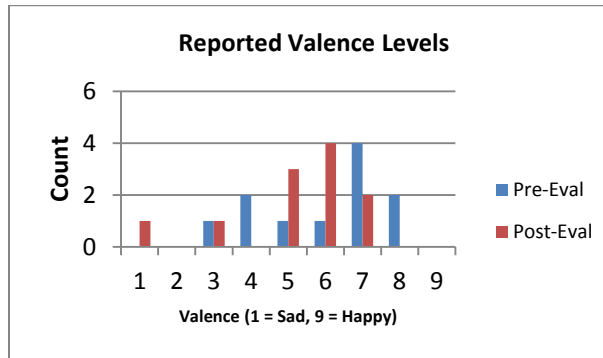


Figure 5

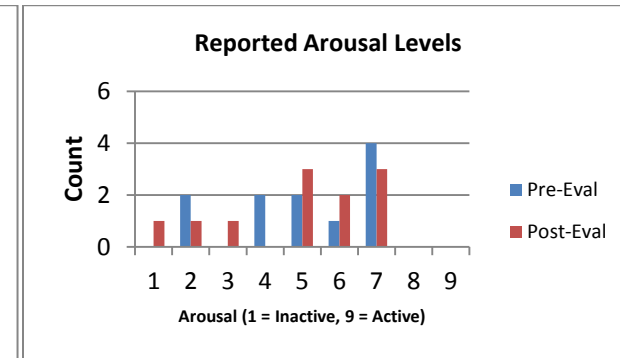


Figure 6

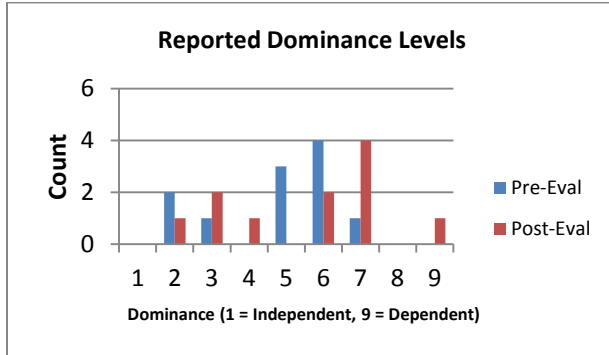


Figure 7



Figure 8

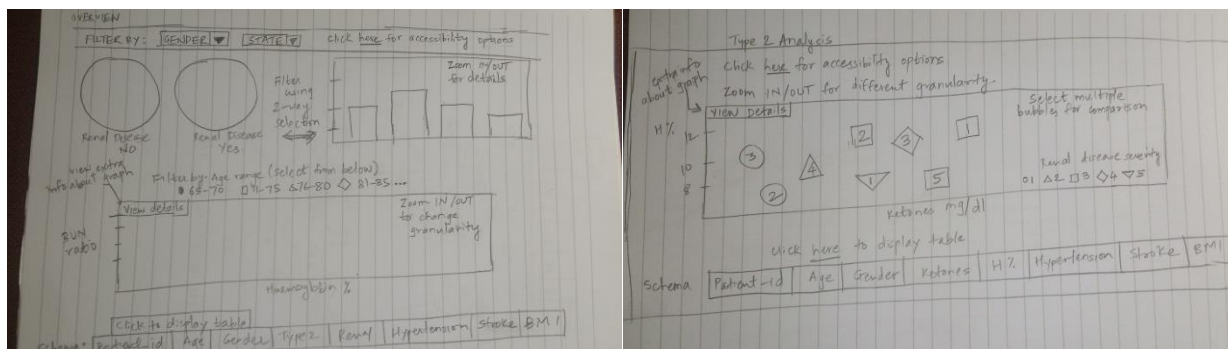


Figure 9: Pencil Sketches



Figure 10: Final prototypes for Overview Tab and Disease Tab

We then invited our participants to evaluate our prototypes on the same scale as before and obtained their feedback. Based on the results of our evaluation (Figure 11) we concluded that our prototype was more approachable, easier to understand, less overwhelming and equally aesthetic.

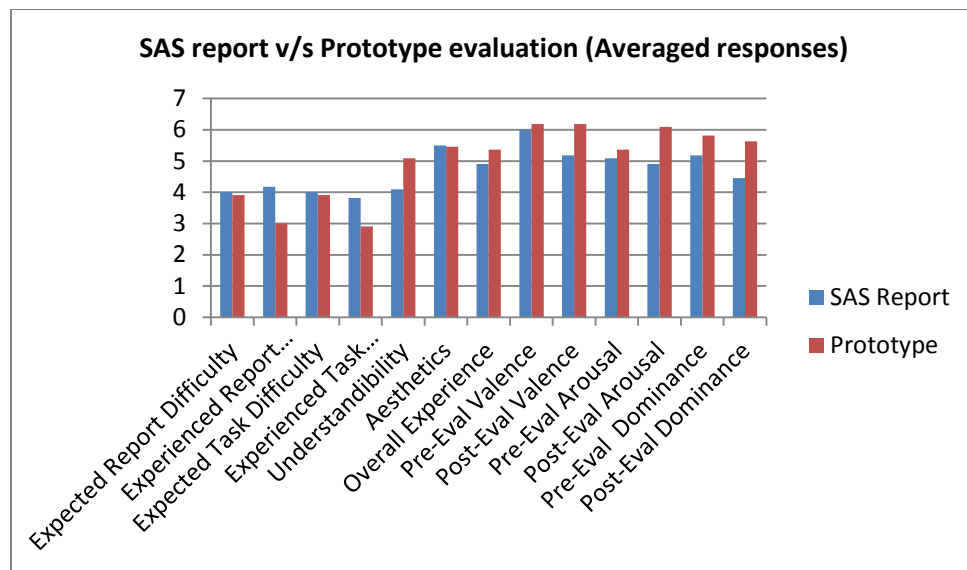


Figure 11: Evaluation results of our prototype compared to SAS report.

Conclusion

Designing visual reports for good user experience is tricky. Add too little information, and the report reduces to a fancy info-graphic. Add too much information, and even the aesthetic appeal isn't enough to provide an approachable solution. By carefully implementing the design principles learnt in this course, we were able to design an aesthetic and approachable prototype for one of the SAS visual reports. While working on the design was a challenge in itself, it was also fun and a great learning experience.