1 SUPPLEMENTAL MATERIALS

This document contains all supplemental materials for the paper: What We Augment When We Augment Visualizations: A Design Elicitation Study of How We Visually Express Data Relationships, published at ACM AVI 2024.

2 AUGMENTATION CATEGORY COUNTS

The raw counts of various augmentation categories observed in our design elicitation study are reported in Table 1.

		Encoding						Mark								
		fill color	stroke color	opacity	size/radius	stroke width	shape	add mark	change mark	glyph	Threshold Line	Segmentation	Shaded Range	Scale Change	Labels	Free-form
Store A is an important store.	bar	9	2	1												1
	line		9			2									1	
	scatter	10			2				1						1	1
Stores in South America are prioritized.	bar	7	3	1										1	1	1
	line		12	1											2	
	scatter	9		1					1					1	1	1
Each store must make a minimum of $10K in revenue per month.	bar	5	2						2		5	2			2	
	line		1					5			12	4			2	
	scatter	5			2				3	1	4		1		2	
Stores where the revenue is below average should be the focus.	bar	10	1	1							9					1
	line		4	1				7			6	2			3	
	scatter	9		1	4				2		9					1
Store revenue during the last quarter of the year (October to December) is most important.	bar								1			8				
	line							1	1		7	5	4			
	scatter						1	6	2		1					
The monthly revenue for each store is predicted to be $10K ± $5K per month.	bar							1			5	4	1		1	
	line		3					1			11	1	4		3	
	scatter	1							2		7		2		1	
20% of revenue is corporate tax.	bar											12				
	line		3			2		9								
	scatter							6	6	1						
Revenue is the sum of cost and profit.	bar											12				
	line							9	1			2				
	scatter							4	7							
The highest total revenue made in prior years is $360K.	bar	4						2			10					
	line		1					7			4	1				
	scatter	3						2	2		8					
Monthly revenue tends to peak in December.	bar		1									8				
	line		1					7			4	3			1	
	scatter						1	5	4							
Total		115		7	8	4	2	72	35	2	102	64	12	2	21	6

Table 1: How frequently each augmentation category was used by study participants for a given combination of prompt and chart type. If more than one augmentation was used in the same visualization, we counted the visualization twice. The most common augmentations are highlighted in blue. The calculated totals of fill color and stroke color have been combined.

3 PARTICIPANT DRAWINGS

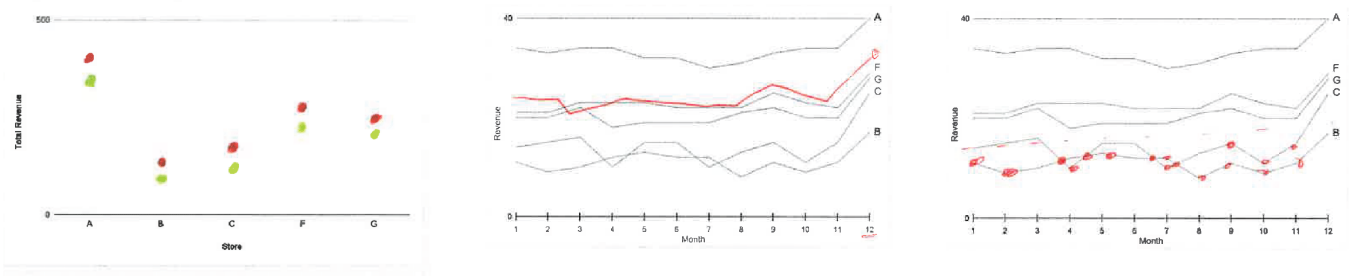

Figure 1: From left to right: examples of participants duplicating, adding, and layering marks onto existing visualizations.

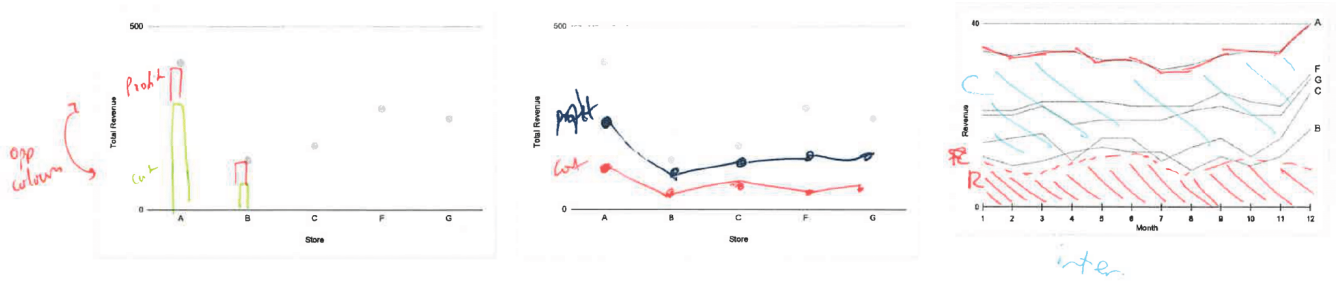

Figure 2: Examples of participants changing the mark used in a visualization. From left to right: changing a point chart to a bar chart, changing a point chart to a line chart, and changing a line chart to an area chart.

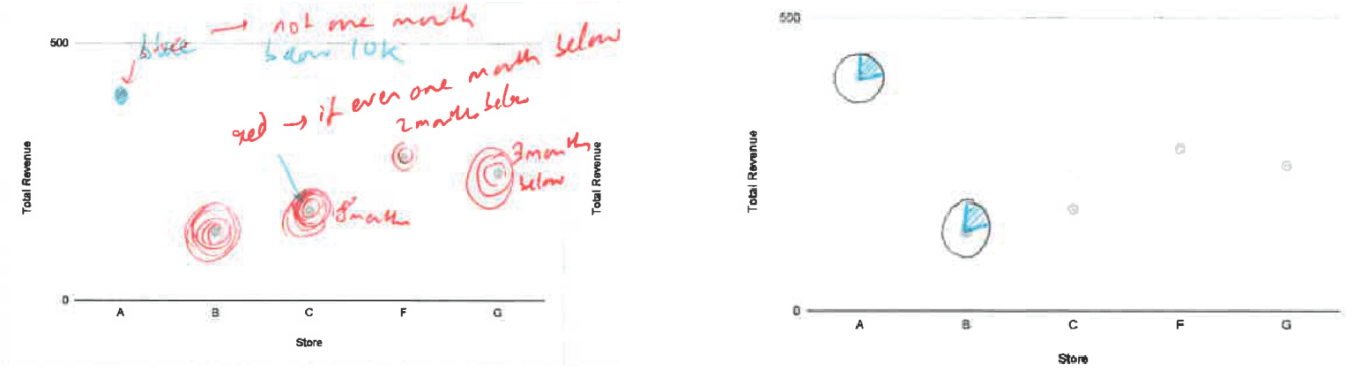

Figure 3: Two instances where participants used glyphs to convey the prompts.

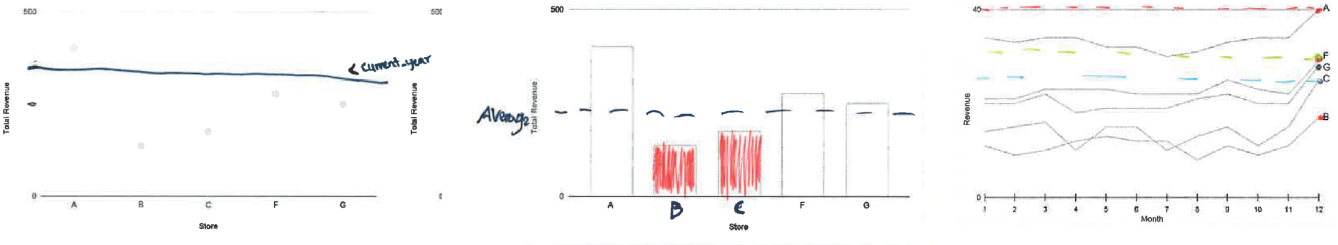

Figure 4: Examples of threshold lines added by participants. Multiple threshold lines may be added to a single visualization, and each line could be customized by style and color.

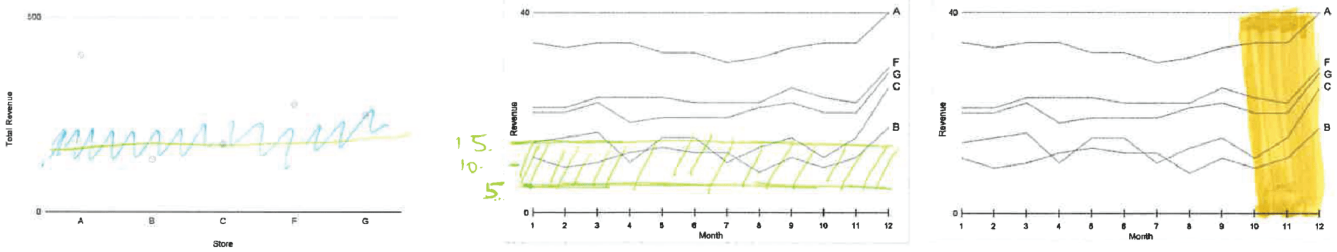

Figure 5: The visualization may be shaded to highlight important value ranges along an axis.

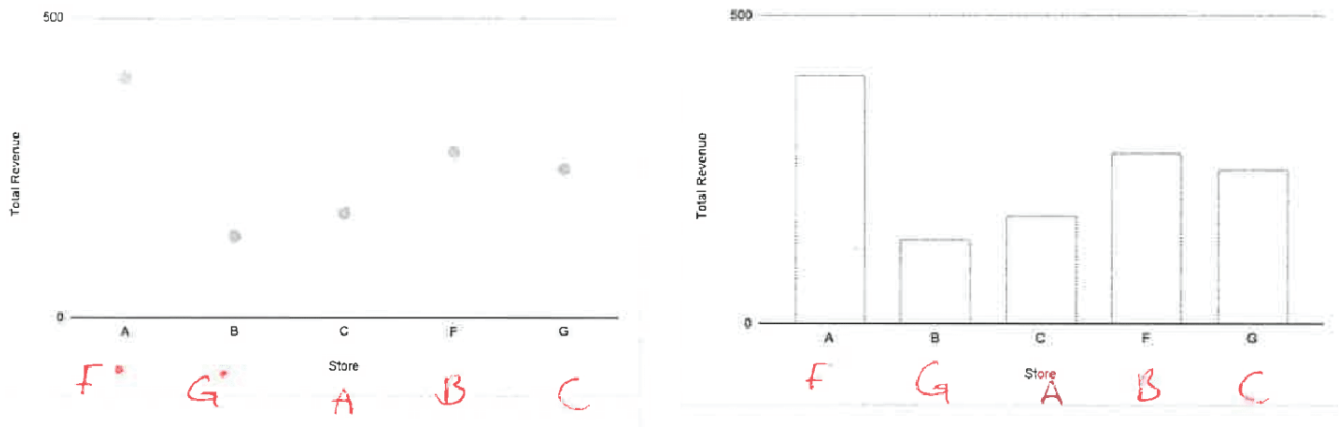

Figure 6: Two augmentations by P11 where they changed the order of elements (new order listed below) to convey priority.

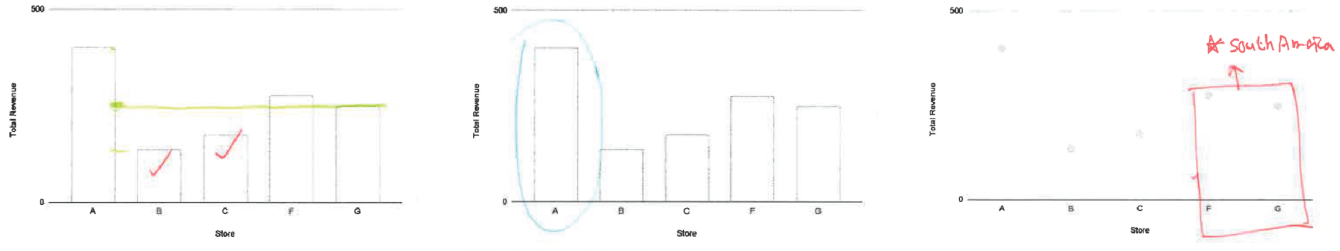

Figure 7: Examples of informal free form graphical marks made by participants.