Gemini API (gemini-2.0-flash-001) Gesture Annotation, No Context

Data Visualization

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Manual Validation Data Format (Xcel)

Video Label	Manual Annotation	Man_Cat	Movement	Category	Cat_Val	Subcategory	Sub_Val	Explanation	video_duration(s)	process_time(s)
11-11-1	shrug	emblem	TRUE	emblem	TRUE	shrug	TRUE	TRUE	2.8	10.2
11-11-2	twohandbeat	beat	TRUE	beat	TRUE	n/a	n/a	vaid	3.2	7.3
11-11-3	twohandbeat	beat	TRUE	beat	TRUE	n/a	n/a	TRUE	2.7	7.2
11-11-4	from(head), iconic imagination	iconic	TRUE	Illustrator	FALSE	n/a	n/a	TRUE	2.8	6.5
11-11-5	iconic(progression)	metaphoric	TRUE	metaphoric	TRUE	none	FALSE	TRUE	0.7	11.3

Table 1: first 5 observations of 11 datapoints (adapted from the Xcel file). The raw data format that all visualizations were created off.

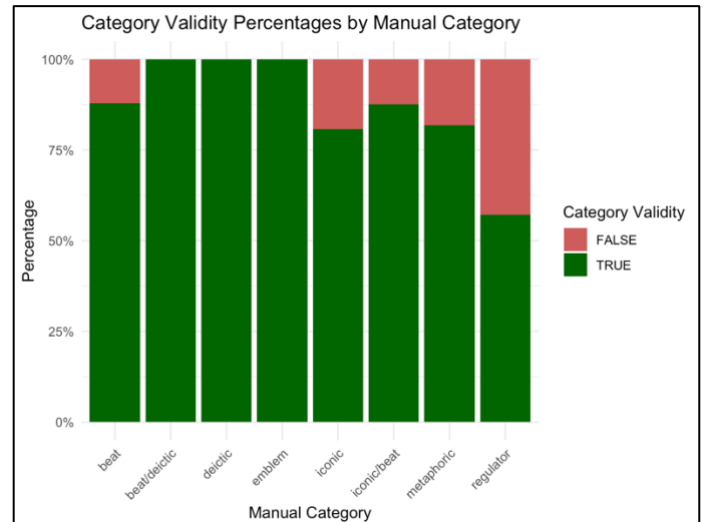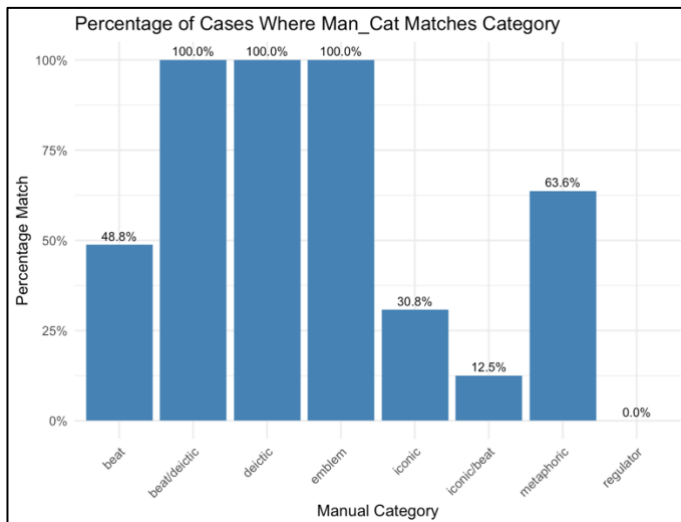## Category Correctness and Validity Plots

Figure 1 (Left): Percentage of Cases where the manually annotated category matches the category that Gemini assigned. **Figure 2 (Right):** Visual representation of the ratio of valid/invalid categorizations Gemini made, organized by manual category.

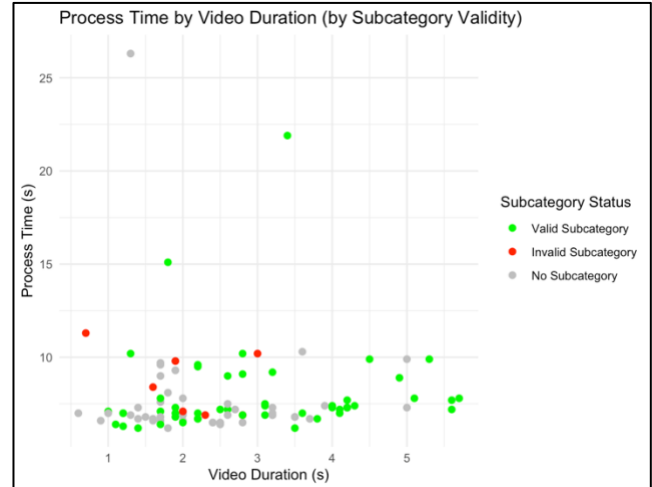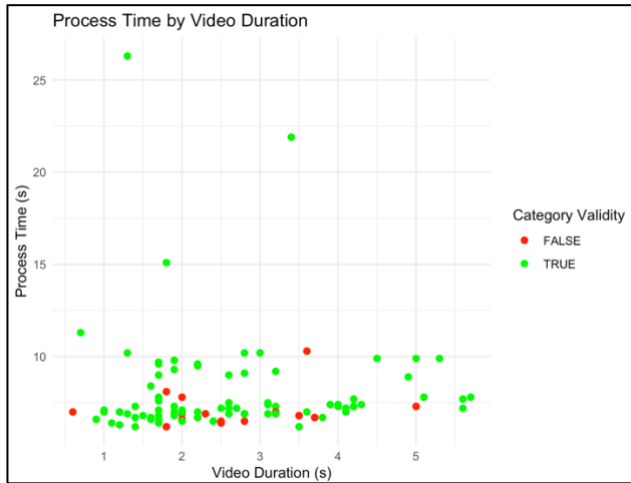## Video Duration/Processing Time Plots

Figure 3 (Left) Processing time over video duration. Videos that Gemini returned valid gesture categories for are represented by green points, videos that Gemini returned invalid gesture categories for are represented by red points. **Figure 4 (Right)** Processing time over video duration. Videos that Gemini returned valid gesture subcategories for (E.g. correct identification of the subject of an iconic gesture) are represented with green points. Videos that Gemini returned invalid subcategories for are represented by red points. Videos that Gemini returned no subcategory for are represented by grey points.
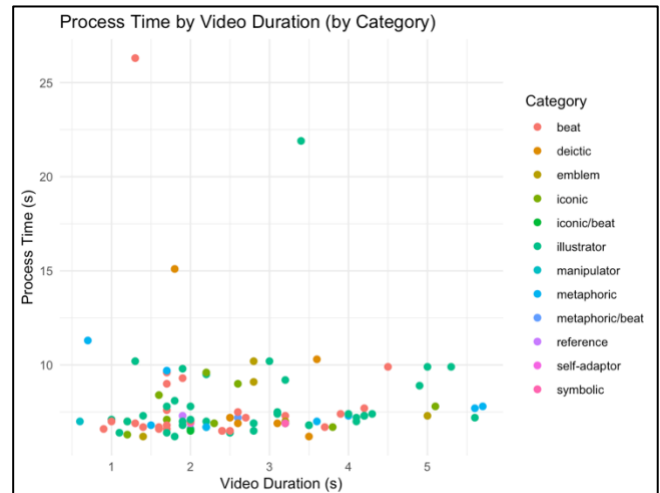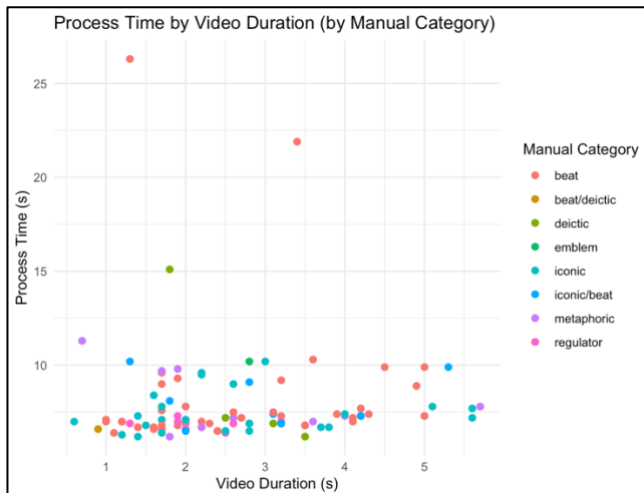

Figure 5 (Left): Processing time over video duration, with each manual gesture category labeled with a unique color. Figure **6 (Right):** Process time over video duration, with each Gemini-assigned category labeled with a unique color.