

## Visualizations for API Data Source

(<https://lookerstudio.google.com/reporting/98356400-d1cf-4b8a-8cec-1c5950a2797a>)

We connected Looker directly to our AWS PostgreSQL “raw.yt\_trending” table and used SQL Runner to drop in our two API queries. For the descriptive query (“views per day”), we ran the CTE-based SQL in SQL Runner, then switched to a vertical bar chart, set **title** as the dimension and **views\_per\_day** as the metric, enabled data labels, and saved it as a Look titled “Top 5 Videos by Views Per Day.” For the diagnostic query (top engagement within each duration bucket), we again pasted the CTE + window-function SQL into SQL Runner, visualized the results as a bar chart with **duration\_category** on the x-axis and **engagement\_rate** on the y-axis, formatted the rates to four decimal places, and saved it as “Top Video Engagement by Length Category.” Finally, we assembled both Looks onto a single “YouTube API Analytics” dashboard in Looker, adding text tiles for business questions, insights, recommendations, and predictions.

## Visualizations for Web-Scrape Data Source

(<https://lookerstudio.google.com/reporting/7c5e9ed0-1fa5-44a9-9683-cbb5423696b0>)

Using Looker’s Explore on the **raw.yt\_video** view, we created two ad-hoc Looks without writing any LookML. For the descriptive analysis (“top channels by total reactions”), we defined a custom dimension **video\_reactions** (**like\_count** + **comment\_count**), a custom measure **channel\_total\_reactions** (sum of **video\_reactions**), and a table calculation **video\_rank** (partitioned row number by **channel\_name**); we filtered **video\_rank = 1**, ran the query, and built a bar chart with **channel\_name** vs. **channel\_total\_reactions**. For the diagnostic analysis (“highest average like-to-comment ratio”), we made a custom dimension **like\_comment\_ratio** (likes ÷ comments), a custom measure **avg\_like\_comment\_ratio** (average of that ratio), and a rank table calc to pick the top five channels; we visualized this as a bar chart with **channel\_name** vs. **avg\_like\_comment\_ratio**. Both charts were saved as Looks and placed onto a “YouTube Web-Scrape Analytics” dashboard, again supplemented with text tiles for context.