



The most striking feature in the top-left block is that **cpp_time_ns**, **rust_time_ns**, and **time_diff_ns** form a perfect trio (all correlations ≈ 1.0). That simply reflects that these three columns are algebraically linked (one is literally the difference of the other two), so they rise and fall in lockstep. Conversely, **speedup** sits at about -0.27 with each of those time metrics: as raw runtimes go up, your computed speedup goes down. The three memory-use columns (**cpp_mem_kb**, **rust_mem_kb**, **mem_diff_kb**) show no meaningful variation here, so they appear blank in the heatmap.

Down in the middle block, **Count/Panics** and **Time (ms)** display a strong negative correlation (≈ -0.82), indicating that runs with more panics tend to finish faster (or, put another way, shorter times coincide with higher panic counts). The **msgs** column was essentially constant, so it doesn't contribute a visible pattern. At the bottom right, **secs** and **mps** have a moderate negative correlation (≈ -0.57): longer elapsed seconds correspond to a lower messages-per-second rate, which is exactly what you'd expect if throughput drops as run-time increases. The final **ms** column simply correlates perfectly with itself and shows no cross-relationships.