My project aimed to investigate the impact of various internet browsing activities on ping requests to google.com. I wanted to determine whether different network usage patterns influenced the round-trip time (RTT) of pings. To achieve this, I developed a Python script that systematically pinged google.com five times every 20 seconds. During each iteration, the script recorded an ID, timestamp, target server, average RTT of the five ping requests, and the ongoing activity. These data were stored in a PostgreSQL database. To maintain a runtime of approximately one hour, I conducted six distinct activities. The primary experiment involved streaming YouTube videos, alongside other activities such as Twitch streaming, Roku channel usage, uTorrent downloading, idling, and regular internet browsing. This comprehensive approach enabled a thorough exploration of how different online behaviors impact network performance.

The findings of my experiment revealed no statistically significant correlation between different internet browsing activities and RTT to google.com. To reach this conclusion, I conducted an ANOVA test with RTT as the dependent variable and 'activity' as the independent variable. To visualize the data, I created a boxplot displaying the mean RTT for each distinct activity performed during the experiment. Despite conducting various online activities including streaming, downloading, and general browsing, the differences in mean RTT were not statistically significant across the activities. This suggests that, within the parameters of my experiment, internet browsing activities did not measurably impact the responsiveness of the network to ping requests to google.com.

Boxplot of rtt Grouped by activity