# Twitter in Redis

For this project, I used Python and Redis to simulate the functionality of posting tweets and retrieving home timelines. Below are my results for each functionality.

| API Method | API Calls/Sec |
|---|---|
| post_tweet | 827.2 |
| get_timeline | 13482.7 |

My system runs MacOS, has an M1 Pro chip, and has 32 GB of RAM. I believe hardware may significantly impact the performance of either functionality because it often acts as a limiting factor. Regardless of how well architected the programs are, software can always hinder performance. However, I have relatively extensive hardware and believe posting tweets is slower than what was observed with an RDBMS because we are having to generate timelines on the fly. We are also not batch processing tweets, as we could efficiently in SQL. Using a hash table, we are able to get timelines as they refer to tweets, however, a higher performance solution may be to store tweets as strings. If we were to only post tweets and generate timelines separately, we could improve tweet posting time at the cost of fetching timelines.