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Twitter is an online news and social networking site where people communicate in short messages called tweets. With a limit of 280 characters, a person can “tweet” short messages to those that follow you. With a tweet, a person can send information to virtually anyone in any part of the world. With that ability, we can see the amount of data that is being processed daily. Based on twitters software engineer website it states “our mission is to build the fastest, most reliable, and largest-scale data processing technologies in the world - able to cope with ever-increasing volumes of data in real-time - and then apply them to the company’s most critical and fundamental data problems.”

Most of the programming tools used by Twitter are open source. The stack is made up of Rails for the front side, C, Scala and Java for the middle business layer, and MySQL for storing data. Everything is kept in RAM, and the database is just a backup. The Rails front end handles rendering, cache composition, DB querying, and synchronous inserts. This front end mostly glues together several client services, many written in C: MySQL client, Memcached client, a JSON one, and others. The middleware uses Memcached, Varnish for page caching, Kestrel, an MQ written in Scala, and a Comet server is in the works, also written in Scala and used for clients that want to track a large number of tweets.

Since they first started, Twitter has gone through many changes, such as trying to distance themselves as a web-based app to be a set of APIs that power mobile clients worldwide. Twitter now has 150M worldwide active users, handles 300K QPS to generate timelines and a firehose that churns out 22 MB/sec. Four hundred million tweets a day flow through the system, and it can take up to 5 minutes for a tweet to be posted by someone like Barack Obama, who has 112 million followers.

There are many teams across Twitter, some of which are Product, Engineering, Design, and Data Science. Each of these teams plays a different role in helping users discover the value of Twitter while managing the growth of the influx of data. According to glassdoor, Twitter received a 4.5/5, with 91% of its employees saying they would recommend working there, while 87% approve of their CEO and his plans for the company. This may be very important to people who apply to jobs as they would want to work for someone whose values are aligned with theirs.

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