

Figure 10: Plot showing distribution of video *time-to-viral* (no 24 hour time constraint; videos not eventually reaching our 500K viewership threshold for virality excluded).

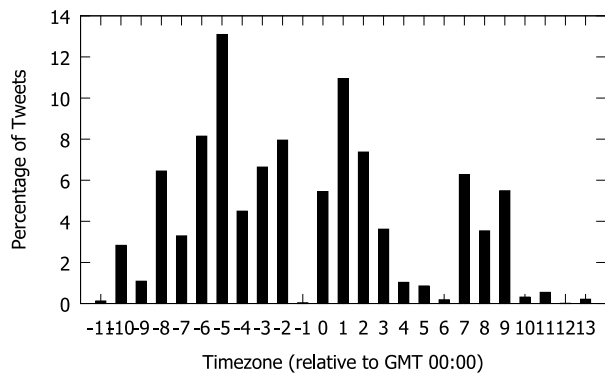


Figure 11: Twitter activity by self-reported timezone (user profile), for reference note: -5 (New York), +1/+2 (Europe).

that CrowdCast’s system design can be applied more generally across domains. Thus, CrowdCast leaves open broad avenues for research in integration of complementary analytic techniques and in pursuit of alternative inference goals.

References

Agarwal, S. 2009. Social networks as internet barometers for optimizing content delivery networks. In *ANTS*. IEEE.

Albert, R., and Barabási, A.-L. 2002. Statistical mechanics of complex networks. *Reviews of modern physics* 74(1):47.

Allocca, K. 2012. Kevin allocca: Why videos go viral. http://www.ted.com/talks/kevin_allocca_why_videos_go_viral.html.

Bao, X.; Gowda, M.; Mahajan, R.; and Choudhury, R. R. 2013. The case for psychological computing. In *HotMobile*. ACM.

Berger, J. A., and Milkman, K. L. 2009. What makes online content viral? Available at SSRN 1528077.

Broxton, T.; Interian, Y.; Vaver, J.; and Wattenhofer, M. 2010. Catching a viral video. In *ICDMW*. IEEE.

Cha, M.; Haddadi, H.; Benevenuto, F.; and Gummadi, P. K. 2010. Measuring user influence in twitter: The million follower fallacy. *ICWSM* 10:10–17.

Clauset, A.; Shalizi, C. R.; and Newman, M. E. 2009. Power-

law distributions in empirical data. *SIAM review* 51(4):661–703.

Dong, A.; Zhang, R.; Kolari, P.; Bai, J.; Diaz, F.; Chang, Y.; Zheng, Z.; and Zha, H. 2010. Time is of the essence: improving recency ranking using twitter data. In *WWW*. ACM.

GNIP. 2014. GNIP: The Social Media API. <http://gnip.com/twitter/decahose/>.

Goel, S.; Watts, D. J.; and Goldstein, D. G. 2012. The structure of online diffusion networks. In *EC*. ACM.

Guerini, M., and Strapparava, C. 2011. Exploring text virality in social networks. In *ICWSM*.

Hoang, T.-A., and Lim, E.-P. 2012. Virality and susceptibility in information diffusions. In *ICWSM*.

Kwak, H.; Lee, C.; Park, H.; and Moon, S. 2010. What is twitter, a social network or a news media? In *WWW*. ACM.

Lerman, K., and Hogg, T. 2010. Using a model of social dynamics to predict popularity of news. In *WWW*. ACM.

Li, R., et al. 2012. Towards social user profiling: unified and discriminative influence model for inferring home locations. In *SIGKDD*. ACM.

Malewicz, G.; Austern, M. H.; Bik, A. J.; Dehnert, J. C.; Horn, I.; Leiser, N.; and Czajkowski, G. 2010. Pregel: a system for large-scale graph processing. In *SIGMOD*. ACM.

Mathioudakis, M., and Koudas, N. 2010. Twittermonitor: trend detection over the twitter stream. In *SIGMOD*. ACM.

Morstatter, F.; Liu, H.; and Carley, K. M. 2013. Is the sample good enough? comparing data from twitter’s streaming api with twitter’s firehose.

Sakaki, T.; Okazaki, M.; and Matsuo, Y. 2010. Earthquake shakes twitter users: real-time event detection by social sensors. In *WWW*, 851–860. ACM.

Shamma, D. A.; Yew, J.; Kennedy, L.; and Churchill, E. F. 2011. Viral actions: Predicting video view counts using synchronous sharing behaviors. In *ICWSM*.

Szabo, G., and Huberman, B. A. 2010. Predicting the popularity of online content. *Comm. of the ACM* 53(8):80–88.

Topsy. 2014. Twitter search, monitoring, & analytics. <http://topsy.com>.

Twitter blog. 2013. Maximum tweek per second. <https://blog.twitter.com/2013/new-tweets-per-second-record-and-how>.

UnrulyMedia. 2013. Unruly sharerank. <http://www.unrulymedia.com/socialvideolab>.

Wallsten, K. 2010. “yes we can”: How online viewership, blog discussion, campaign statements, and mainstream media coverage produced a viral video phenomenon. *Journal of Information Technology & Politics* 7(2-3):163–181.

Weng, J.; Lim, E.-P.; Jiang, J.; and He, Q. 2010. Twitterrank: finding topic-sensitive influential twitterers. In *WSDM*. ACM.

Zaman, T. R.; Herbrich, R.; Van Gael, J.; and Stern, D. 2010. Predicting information spreading in twitter. In *Workshop on Computational Social Science and the Wisdom of Crowds, NIPS*, volume 104, 17599–601. Citeseer.