Listening to Twitter Conversations: Floods, Extreme Weather, and Climate Change

<u>Jim Moffitt, Twitter Developer Relations</u> team Thursday, Apr 28, 2022 4:00 pm EDT

Below you will find information, links, and resources related to today's presentation.

- Links to flood early-warning systems that have integrated the Twitter API:
 - https://txpub.usgs.gov/txwaterdashboard/
 - o https://petabencana.id/
- Twitter #ExtremeWeather series September 2021
 - o Crowd-sourcing flood reports in Jakarta
 - o <u>Texas freeze</u>
 - o Typhoon Hagibis in Japan
 - Australian bush fires
- Example use cases of the Twitter Developer Platform: Crowd-sourcing on-line safety, studying public sentiment, getting financial insights, and helping in disasters.
 - UC Davis and Max Planck Institute Using Twitter data to study how people adapt to climate change. Related research publications:
 - Using remarkability to define coastal flooding thresholds
 - Weather impacts expressed sentiment
 - Learning, adaptation, and weather in a changing climate
 - o Penn Medicine Center for Digital Health and the COVID-19 real-time stream
 - S&P Dow Jones Indices created a brand new stock market index powered by Twitter data

Getting started with the Twitter API

Twitter API v2 documentation

The best way to get started with the Twitter API v2 is starting reading our developer documentation at https://developer.twitter.com/en/docs/twitter-api. Documentation for v2 endpoints includes an introduction, a quick start guide, advice on migrating from previous versions, and an API reference.

There are several Twitter API access levels, including two free levels and one designed for academic researchers. To learn more about these levels, see <u>HERE</u>.

To learn more about Twitter Academic Research access, see HERE and HERE.

No code tools

We have recently added new "no-code" tools for interacting with the Twitter API v2. These tools do not require any programming experience to use:

- Every v2 endpoint has a "Quick start" guide that includes a link to a <u>Postman</u> collection of HTTP <u>requests to the Twitter API</u>. This collection pre-defines example requests and provides a user-interface for setting request parameters and reviewing responses. Using this collection requires authentication tokens from a Twitter developer app, See <u>this tutorial</u> for how to get started with the TwitterDev Postman collection.
- A web app that enables anyone with a Twitter account to try any of the Twitter API v2
 endpoints: https://oauth-playground.glitch.me. You will need a Twitter account to use
 this tool.
- Here is a web app (built on the v2 search endpoint) that can be used by to download JSON and CSV files containing Tweets matching user queries:
 https://developer.twitter.com/apitools/downloader.
 To use this service, you must be enrolled in our academic program (so eligible for grad school students and research groups). This tool also requires an OAuth 2.0 Bearer Token generated for a developer app associated with an Academic project created HERE.

Code examples

We have a lot of v2 code resources available at https://github.com/twitterdev:

- Here are a set of simple v2 examples in Python, Java, JavaScript, and Ruby: https://github.com/twitterdev/Twitter-API-v2-sample-code. If you are new to programming and/or the Twitter API, these provide basic examples on how to make API requests.
- We recently released two new SDKs for Java and Type/JavaScript. These libraries provide a quick way to integrate the Twitter API in these languages:
 - https://github.com/twitterdev/twitter-api-java-sdk
 - https://github.com/twitterdev/twitter-api-typescript-sdk
- Example search clients:
 - Python version: https://github.com/twitterdev/search-tweets-python/tree/v2.
 Originally created for the enterprise search endpoint, the 'v2' branch has been updated for Twitter API v2 Recent and Full-archive search.
 - Ruby version: https://github.com/twitterdev/search-tweets-ruby