Exploring Facebook's Social Graph API

The Facebook platform is a mature, robust, and well-documented gateway into what may be the most comprehensive and well-organized information store ever amassed, both in terms of breadth and depth. It's broad in that its user base represents about one-seventh of the entire living population, and it's deep with respect to the amount of information that's known about any one of its particular users. Whereas Twitter features an asymmetric friendship model that is open and predicated on following other users without any particular consent, Facebook's friendship model is symmetric and requires a mutual agreement between users to gain visibility into one another's interactions and activities.

Furthermore, whereas virtually all interactions except for private messages between users on Twitter are public statuses, Facebook allows for much more finely grained privacy controls in which friendships can be organized and maintained as lists with varying levels of visibility available to a friend on any particular activity. For example, you might choose to share a link or photo only with a particular list of friends as opposed to your entire social network.

As a social web miner, the only way that you can access a Facebook user's account data is by registering an application and using that application as the entry point into the Facebook developer platform. Moreover, the only data that's available to an application is whatever the user has explicitly authorized it to access.

For example, as a developer writing a Facebook application, you'll be the user who's logging into the application, and the application will be able to access any data that you explicitly authorize it to access. In that regard, as a Facebook user you might think of an application a bit like any of your Facebook friends, in that you're ultimately in control of what the application can access and you can revoke access at any time.

The Facebook Platform Policies document is a must-read for any Facebook developer, as it provides the comprehensive set of rights and responsibilities for all Facebook users as well as the spirit and letter of the law for Facebook developers. If you haven't already, it's worth taking a moment to review Facebook's developer policies and to bookmark the Facebook Developers home page, since it is the definitive entry point into the Facebook platform and its documentation.

Although we'll programmatically access the Facebook platform later in this chapter, Facebook provides a number of useful developer tools, including a Graph API Explorer app that we'll be using for initial familiarization with the Social Graph. The app provides an intuitive and turnkey way of querying the Social Graph, and once you're comfortable with how the Social Graph works, translating queries into Python code for automation and further processing comes quite naturally. Although we'll work through the Graph API as part of the discussion, you may benefit from an initial review of the well-written "Getting Started: The Graph API" document as a comprehensive preamble.

Understanding the Social Graph API

As its name implies, Facebook's Social Graph is a massive graph data structure representing social interactions and consisting of nodes and connections between the nodes. The Graph API provides the primary means of interacting with the Social Graph, and the best way to get acquainted with the Graph API is to spend a few minutes tinkering around with the Graph API

Explorer. It is important to note that the Graph API Explorer is not a particularly special tool of any kind. Aside from being able to prepopulate and debug your access token, it is an ordinary Facebook app that uses the same developer APIs that any other developer application would use.