

New York University  
Social Media Working Group

100 Washington Sq. E.  
1009 main building  
New York, NY 10003  
fax: 212-995-4204

The newly formed NYU Social Media Working group is looking for a software engineer to work with a group examining how participation in social media sites (such as Twitter, bit.ly, Facebook) influences political participation in events such as voting and protest. There are spectacular scientific opportunities to those with the tools needed to mine the social web. We need a software engineer that can build databases, primary data acquisition systems, and machine learning engines to enable political scientists and psychologists learn from very large social-media derived datasets.

Candidates for the Software Engineer position must hold a degree in computer science and relevant experience. Successful candidates are expected to have experience in the following areas: relational databases, Python, Unix, and Java or C++. Prior experience with statistical and machine learning codes and packages (e.g. R, Matlab, or numPy, Weka) is not required but highly desirable.

**About the project:** We will construct a comprehensive data set (with your help) of incoming and outgoing social media messages using systematically structured formats that are ideally suited to machine learning methods, and we will integrate information on social network connectivity and a vast array of metadata on individuals and their social contacts. By developing new methods to harvest and combine these data sources effectively, it will be possible to transform the scientific study of social and political attitudes and behavior. *Every time* individuals use social media, they leave behind a digital footprint of *what* was communicated, *when* it was communicated, and, to *whom* it was communicated. Typically, such precise estimates of these variables are available only to laboratory investigators working in artificial settings. To our knowledge, no previous study has successfully used fine-grained social influence data such as these to predict consequential behavioral outcomes, such as attendance at a given protest or rally or the casting of a vote in an election. This will give political scientists and psychologists access to data with long duration (e.g., as we follow sequential, time-stamped tweets of individuals and those they follow) which will open up whole new types of analysis. The project is a joint effort between CS, poli sci and psychology: drawing from computational-biology and computer science we will adapt sophisticated computational methods of approximate inference and machine learning to evaluate our

behavioral models (taken from poli sci and psychology) using extremely large social media and social network datasets.

**About the site and the team:** New York University has established itself as a Global Network University, a multi-site, organically connected network encompassing several key global cities. The network has three foundational, degree-granting campuses: New York, Abu Dhabi, and Shanghai, complemented by a network of more than fifteen research sites across five continents. You will be working at the New York City campus. The Social Media Working Group includes Drs. John Jost (Experimental Psychology), Josh Tucker and Jonathan Nagler (Political Science) and Rich Bonneau (CS, Computational Biology). You will also be expected to work with several PhD students in multiple departments. You will be included in the process of communicating our findings to both lay and scientific audiences: publishing scientific papers, running workshops, and writing web content to explain what we do to people who were born prior to the invention of the light bulb.

Interested parties should send a Curriculum Vitae to Richard Bonneau ([bonneau@cs.nyu.edu](mailto:bonneau@cs.nyu.edu)) and Jonathan Nagler ([jonathan.nagler@nyu.edu](mailto:jonathan.nagler@nyu.edu)). Candidates should also provide the email addresses of two references and, optionally, links to example code.