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effort under the scope of this task is required, the exercise of subsequent option periods may include the exercise of the optional CLIN associated with this task in the respective option period.

**2.2.6 Option Period 1:** The Contractor shall continue to mature the work under “Twitter Expand and Prune” and test this capability in an operational environment at a DHS or HSE partner site identified by DHS.

- 2.2.6.1 The Contractor shall develop and execute a test plan that includes performance measures and metrics and tailor/refine capabilities to meet DHS or the host HSE partner’s needs. The Contractor shall conduct its operational testing onsite at the deployed location(s).
- 2.2.6.2 The Contractor shall develop and deliver training, including a user guide, for onsite staff to use and maintain the capability if it is selected for long-term mission use.
- 2.2.6.3 The Contractor shall deliver a report summarizing the experiment(s) and findings.
- 2.2.6.4 The anticipated duration of this task during Option Period 1 is twelve (12) months from date of option exercise.

### **2.3 Task 3: Influence Bot Detection**

**2.3.1** The Contractor shall develop automated tools to determine whether a particular social media account corresponds to a single human actor, or whether the account was programmatically generated to exert influence.

**2.3.2** The Contractor shall produce a paper providing an overview of “influence bot detection” technologies that have been featured in recent academic publication, evaluating the suitability of each to deal with Very Large Corpus Tweet collections.

**2.3.3** The Contractor shall conduct experiments to identify influence bots acting within recently-spread terrorist propaganda. As fresh “high volume” trends in this area are identified, special attention will be called to that traffic to determine whether bots are being used to extend the reach and reputation of the message, as well as attempting to determine the source and nature of the bot.

**2.3.4** While the final tools are being developed, intermediary techniques for identifying “same message” posts and to evaluate statistically unlikely ratios of “Tweets:Friends:Followers:Likes” will be developed.

**2.3.5** The Contractor shall deliver bot detection techniques on evaluating extremely large corpus collections of messages to identify bots within them, both based on content evaluation and on social connectivity evaluation. The Contractor shall develop tools, or techniques that can

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be used by analysts to determine whether a particular message represents the work of an actively engaged human actor, or is likely to have been generated programmatically.

**2.3.6** Since this effort may develop tools to ultimately support Government efforts to identify, counter, or disrupt messages that are being spread via “computational propaganda,” the Government may, at its discretion, provide the Contractor with messages to test whether the Contractor’s developed tools and techniques can determine if the messages are human-generated or influence bot-generated. If such tests occur, the Contractor shall document the outcomes as part of its monthly reporting for the month in which the tests occur. Any messages provided by the Government are Government Furnished Resources and subject to the limitations of SOW Section 6.0.

**2.3.7** The Government may specify the domain of interest (e.g., terrorism, human trafficking, etc.) for experiments. The outputs of these experiments will be incorporated into the demonstrations, documentation, and artifact deliverables for this task.

**2.3.8** During the base period of performance, the duration of this task is twelve (12) months.

**2.3.9** Based on the results of the base period of performance, additional, more focused effort within the scope of this task may be required during exercised option periods. If such additional effort under the scope of this task is required, the exercise of subsequent option periods may include the exercise of the optional CLIN associated with this task in the respective option period.

**2.3.10 Option Period 1:** The contractor shall continue to mature influence bot detection; conduct demonstrations showing performance and automation, and ready the capability for operational testing in a DHS or HSE partner site(s) identified by DHS.

**2.3.10.1** The Contractor shall refine the capability based on Government feedback and provide progress reports.

**2.3.10.2** The Contractor shall develop and execute a test plan that includes performance measures and metrics and tailor/refine capabilities to meet DHS or the host HSE partner’s needs. The Contractor shall conduct its operational testing onsite at the deployed location.

**2.3.10.3** The Contractor shall develop and deliver training, including a user guide, for onsite staff to use and maintain the capability if it is selected for long-term mission use.

**2.3.10.4** The Contractor shall deliver a report summarizing the experiment(s) and findings.

**2.3.10.5** The anticipated duration of this task during Option Period I is twelve (12) months from date of option exercise.