Verification of Crowdsourced Crash Reports Survey

Survey Overview

The purpose of this survey is to physically verify road traffic crash (RTC) reports that were reported by bystanders using Twitter/Ma3Route in Nairobi, Kenya. Ma3Route is a mobile/web/SMS platform that crowdsources transport data and provides users with information on traffic, RTCs, matatu directions and driving reports. Users post RTC or traffic information to Ma3Route, where Ma3Route then publishes the post on Twitter. In this survey, we sought to verify the accuracy of crowdsourced information as a source of RTC data. We partnered with Sendy Ltd, a Kenyan on-demand logistics startup that offers a marketplace for deliveries and logistics services using a mobile application that connects clients to motorcycle riders and vehicles. When a RTC was reported via Ma3Route/Twitter, a Sendy driver was requested to go to the RTC location to verify whether a crash occurred.

Procedure

In this section, we describe the process by which Sendy drivers were notified of a crowdsourced crash report.

1. An algorithm scraped tweets from @Ma3Route in real time and used a machine learning algorithm to detect RTC related tweets. When the algorithm detected a RTC tweet, the tweet was sent to a field coordinator for the project. The field coordinator for the project confirmed whether the tweet reported a crash with sufficient location information and, if so, made a request on the Sendy Ltd platform for a driver to go to the RTC location.
2. Sendy drivers that were a part of this survey (15 drivers) were alerted of the request. A Sendy driver could choose to accept the request, then would travel to the location.
3. Once a Sendy driver arrived at the RTC location, they filled out a short survey verifying the RTC—if there was no RTC nearby, they were instructed to ask a passer-by if one occurred recently. Sendy drivers were instructed to not go near the crash, and to not interfere with any first responders.

Questionnaire

Sendy drivers were instructed to answer two questions to verify the crash:

Q1: Do you observe a crash at the specified location?

- Yes
- No

Q2: If [No] to Q1 – Why is there no crash?

- Crash already cleared
- The crash isn't at this location, but is nearby
- There never was a crash