

Visvesvaraya Technological University

Belgaum



A
PROJECT REPORT
On

**“Tweet Analysis for Real Time Event Detection and
Earthquake Reporting System Development”**
(KSCST Sponsored)

Submitted in partial fulfillment of the requirements for the award of the
degree
Bachelor of Engineering in

COMPUTER SCIENCE AND ENGINEERING

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2013-2014

ABSTRACT

We investigate the real-time interaction of events such as earthquakes and propose an algorithm to monitor tweets and to detect a target event. To detect a target event, we devise a classifier of tweets based on features such as the keywords in a tweet. Subsequently, we produce a probabilistic spatiotemporal model for the target event that can find the center of the event location.

We regard each Application users as a sensor and apply particle filtering, which are widely used for location estimation. The particle filter works better than other comparable methods for estimating the locations of target events. As an application, we develop an earthquake reporting system. Because of the numerous earthquakes and the large number of android users throughout the world, we can detect an earthquake with high probability (93 percent of earthquakes of Japan Meteorological Agency (JMA) seismic intensity scale 3 or more are detected) merely by monitoring tweets. Our system detects earthquakes promptly and notification is delivered much faster than JMA broadcast announcements.