Feature Constrained Multi-Task Learning Models for Spatiotemporal Event Forecasting

ABSTRACT

Micro blogs such as Twitter and Weibo are experiencing an explosive level of growth. Millions of micro blog users across the world broadcast their daily observations on an enormous variety of topics, such as crime, sports, and politics. Temporal mining of social media, In recent years, much attention has been paid to this area, which focuses on modeling the temporal pattern such as evolutional publish sentiment , dynamic topic, online collaborative environments, and information diffusion .

EXISTING SYSTEM

- Spatial event forecasting from social media is potentially extremely useful but suffers from critical challenges, such as the dynamic patterns of features (keywords) and geographic heterogeneity (e.g., spatial correlations, imbalanced samples, and different populations in different locations).

DRAWBACKS

- This approach uses only for some challenges not for all.
- Slow to achieve efficient and effective model training and calculation.

PROPOSED SYSTEM

We propose a novel multi-task learning framework that aims to concurrently address all the challenges involved. Specifically, given a collection of locations (e.g., cities), forecasting models are built for all the locations simultaneously by extracting and utilizing appropriate shared information that effectively increases the sample size for each location, thus improving the forecasting performance. The new model combines both static features derived from a predefined vocabulary by domain experts and dynamic features generated from dynamic query expansion in multi-task feature learning framework. Different strategies to balance homogeneity and diversity between static and dynamic terms are also investigated. And efficient algorithms

based on Iterative Group Hard Thresholding are developed to achieve efficient and effective model training and prediction.

ADVANTAGES

- ➢ This approach uses for all the challenges.
- ➢ It achieves efficient and effective model training and calculation quickly.

SYSTEM REQUIREMENTS

H/W System Configuration:-

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

S/W System Configuration:-

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.
Server side Script	:	Java Server Pages.
Database	:	MySQL 5.0
Database Connectivity	:	JDBC