INFORMATICS INSTITUTE OF TECHNOLOGY

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Mobile Phone Review Analyzer

A system with multiple heterogeneous data sources integrated to filter out most relevant review and produce a quantitative rating for mobile phone features.

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Abstract

In current consumer community there is an increase use of online platforms to share and exchange opinions, suggestions and experiences regarding products and services which on the other hand know as engage in electronic Word of Mouth (eWOM) communication. In review and comment aspects, each individual and environments may refer to the same feature of a mobile phone with many different vocabularies which is meant to be the same meaning as a whole. To top it all, there are massive number of such review and comment collectors available online and as a consumer who wants to make a well informed decision, it is required to go through online reviews as much as possible in different sites as possible as the crowds are different and the user experiences are different in each crowd hence it is important to get data collected from multiple sources to get better comparison out of all.

The research of the project main focuses to identify what are the most effective factors that a potential mobile phone buyer seeks form online reviews and how to make a massive amount of available online data to be filtered to make an informed decision on the mobile phone industry domain. In this document, a solution introduced named as Review analyzer to integrate multiple heterogeneous data sources and filter out relevant comments and produce a quantitative rating of the features as per the comments available online. Many consumers are not familiar with the technical features of the product. In our proposed framework, we map product features to product reviews by an ontology. So the review analysis is based on the exploration of the semantic relations in the ontology. Statistical figure of feature is introduced as 'Context Associated Relatedness' which describes the quality of feature of product. User allows to do a free text search of reviews to find the most relevant reviews of their query. Cosine Similarity Score is used to find the most relevant quires. As a Qualitative output of the product, the top rated comments are displayed with further filtering and search option to the top comments displayed.

The system implemented in Java language in the Apache Jena framework, with the use of OWL to build the ontology. The common platform to integrate data sources configured in RDF with SPARQL query language to conduct the complex queries on the large data set. Implemented system was tested thoroughly under different conditions and the Review analyzer system was evaluated by evaluators of various domains. Eventually, the test results attested that the analysis, design, implementation and documentation have been carried out in an effective and in an efficient manner.