



INFORMATICS INSTITUTE OF TECHNOLOGY

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UNIVERSITY OF WESTMINSTER (UOW)

BEng/BEng. (Hons) in Software Engineering

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**Travel trend analyzing and intelligent tour route
recommendation system**

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Abstract

Tourism is a fast-growing industry and worldwide, tourism rebounded strongly with the growth of online applications on travel and hospitality. This transformation leads to millions of user-generated online contents on various travel-related digital channels and platforms. Majority of travelers use the internet as an information source for planning trips. Travelers read other travelers' online reviews to narrow down choices.

The unstructured text nature makes it harder to understand the idea behind the review and the biased state of mind of the review, hard to derive valuable insights from reviews, makes the processing review contents more difficult and may leads the user to an unambiguous direction. In present-world all are having a value for a day. If travelers searching for reputable sources, sifting through online reviews and doing research as a holiday planning before happening it will be a big challenge as well as it will be a tedious and a time-consuming task.

The goal of the research presented was to explore how other travelers' reviews are utilized in trip planning process and what the observed trends of those travel destinations in order to overcome the above-mentioned obstacles more efficiently by reducing number of human hours spent on review analyzing. The solution is to provide a month based trend analysis of traveling destinations as well as an intelligence travel route planner with recommendations by analyzing reviews and rating in travel review sites as identified throughout the requirement gathering phase by involving different elicitation techniques. The solution is implemented using Natural Language Processing and Text pre-processing approaches under machine learning techniques are playing a great role in this research in order to carry out the sentiment analysis and word classification modules. And performance testing process was carried out considering the accuracy and the efficiency of the system.

The testing approach carried out Software functional quality testing and Software structural quality testing. The evaluated results revealed that the accuracy of the sentiment analysis and word clarification modules are in the satisfactory level. A critical evaluation process was carried out based on the different evaluation criteria, involving various evaluator groups. The results of the evaluation process stated the strengths and limitation of the project and several enhancements were suggested.

Subject Descriptors:

Document Management and Text Processing, Natural Language Processing, Text Mining

Key Words:

Travelling Spots, Travelling Destinations, NLTK, Text Mining