

INTISARI

IMPLEMENTASI SISTEM WEB SEMANTIK *QUESTION ANSWERING* DALAM BIDANG RESTORAN DAN KULINER DENGAN METODE *RULE-BASED* (STUDI KASUS: DAERAH ISTIMEWA YOGYAKARTA)

Oleh

Nadhifa Sofia
15/378070/PA/16545

Sistem *Question Answering* (QA) telah dikembangkan dalam berbagai pendekatan, seperti menggunakan metode berbasis pengetahuan serta pembelajaran mesin. Namun, belum ada yang mengembangkan sistem QA berbasis pengetahuan dengan kombinasi analisis semantik seperti penggunaan metode *rule-based* yang diimplementasikan dengan pencarian makna pertanyaan untuk analisis semantiknya. Selain itu, penggunaan jenis pertanyaan juga bertujuan untuk mempermudah pencarian makna pertanyaan serta pencarian jawaban.

Penggunaan domain restoran dan kuliner ini ditujukan untuk bisa memberikan saran serta informasi mengenai restoran yang akan dikunjungi oleh masyarakat DI Yogyakarta maupun wisatawan yang akan berwisata kuliner karena restoran tidak hanya berfungsi sebagai tempat makan saja, namun juga untuk tempat berkumpul, mengerjakan tugas, maupun tempat wisata.

Sistem QA ini diimplementasikan dalam pendekatan *rule-based* serta analisis semantik dengan 309 pertanyaan dalam sembilan jenis pertanyaan. Untuk memproses kalimat pertanyaan tersebut, dibutuhkan metode dalam *question analysis*, *information retrieval*, serta *answer extraction*. Sistem ini memberikan hasil akurasi sebesar 96.76% terhadap pertanyaan dalam lingkup restoran dan kuliner. Jenis pertanyaan yang diujikan berupa lokasi, jam kerja, fasilitas, harga, menu, menu spesial, diskon, yang mengadakan diskon, serta konsep restoran.

Kata Kunci: *Information Retrieval, Web Semantik, Sistem Tanya Jawab, Pengolahan Bahasa Alami, Sistem Berbasis Aturan*

ABSTRACT

IMPLEMENTATION OF SEMANTIC WEB QUESTION ANSWERING SYSTEM IN THE FIELD OF RESTAURANT AND CULINARY WITH THE RULE-BASED METHOD (CASE STUDY: SPECIAL REGION OF YOGYAKARTA)

By

Nadhifa Sofia
15/378070/PA/16545

Question Answering (QA) systems have been developed in various approaches, such as using knowledge-based methods and machine learning. However, no one has developed a knowledge-based QA system with a combination of semantic analysis such as the use of rule-based methods that are implemented by searching the meaning of questions for their semantic analysis. In addition, the use of this type of question also aims to facilitate the search for the meaning of questions and search for answers.

The use of restaurant and culinary domains is intended to be able to provide advice and information about restaurants that will be visited by DI Yogyakarta people as well as tourists who will go on culinary tours because the restaurant does not only function as a place to eat, but also for gathering places, assignments, or tourist attractions.

This QA system is implemented in a rule-based approach and semantic analysis with 309 questions in nine types of questions. To process the sentence of the question, a method is needed in question analysis, information retrieval, and answer extraction. This system provides results of accuracy of 96.76% in questions on the restaurant and culinary sphere. The types of questions tested were in the form of locations, working hours, facilities, prices, menus, special menus, discounts, discounts, and restaurant concepts.

Keyword: *Information Retrieval, Web Semantic, Question and Answer System, Natural Language Processing, Rule-Based System*