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Abstract of Master's Thesis

With a population of over 90 million people, Vietnam is an attractive market for many domestic and foreign investors in Southeast Asia. Currently, companies and corporations in Vietnam are deploying and implementing management by intelligent digital technology, in which the exploitation and use of relational database management systems have been applied for years since the beginning of the year. Therefore, at present, the text-to-SQL problem is also an essential need for many foreign investors who want to exploit and learn about their market in Vietnam and manage the company's domestic managers. I researched and learned effective solutions to solve this problem in my research. Due to the short research time, I propose a test of a solution that has been applied in English, the RAT SQL method. This is a solution that many researchers in this field have exploited and improved in the English language and achieved high efficiency. Compared with previous methods, RATSQL has focused on expanding the exploitation of the relationship between the question and the cell value in the database. Using a related aware mechanism has helped to find the implicit connection between the query word and the elements in the database schema. During the experiment with RATSQL, I adjusted the basic parts in RATSQL to match the characteristics of the Vietnamese language, and translated 166 databases in the Spider dataset. The results obtained for the highest accuracy are 64.7% with the RATSQL method combined with PhoBert pre-train.

Keywords:

Text-to-sql, Natural-language understanding, Semantic parsing