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NATURAL LANGUAGE PROCESSING IN SOFTWARE REQUIREMENT GATHERING

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ОПРАЦЮВАННЯ ПРИРОДНОЇ МОВИ В ЗАДАЧАХ СПЕЦИФІКАЦІЇ ВИМОГ ДО ПРОГРАМНОГО ЗАБЕЗПЕЧЕННЯ

My work generally examined the role of natural language in requirement gathering. The descriptive survey method was adopted in carrying out this study. The research design was relevant because of its merit in providing wide scope for obtaining information for the purpose of the study. Stratified random sampling techniques was used to select respondents three selected countries namely Nigeria, Germany and United Kingdom. It was electronically premised in these three selected countries with the aid of the internet and the outlined for the study. Four research objectives were outlined for the study. They are the effect of natural language processing on requirement gathering; the effect of British requirement gatherings on Germans culture and natural languages; the effect of British requirement gathering on Nigerians culture and natural languages; and the major problems of natural language in requirement gathering. The population of the study was from these three selected countries which include the companies that develop linguistic instruments as well as big and small businesses which develop software in order to offer services link to introduce information technologies in workplace. Descriptive survey research was adopted for the study. The primary source of data was used in the course of study. The data were collected electronically via the use of research survey. The sampling procedure used for this research work was a convenience sampling method. One hundred and twenty (120) copies of the questionnaire were administered to the respondents. Percentage and frequency table were used to analyze the data while the hypothesis were tested using Chi-Square statistics.

The finding shows there is a significant relationship between natural language processing and requirement gathering. The study recommended that a system that is meant for processing natural language requirement should satisfy and present a report on the work in building and experimenting with such a system. Future work should include formal analysis on the attributes of the system property coupled with the use of NLP to extract ontology information from a set of requirements. The process of relating natural language and requirement gathering is an information rigorous activity and involves the use of both writing and conversation. Basically, a recorded conversation (could be a word) during an interview is transformed into a written text and this text is then gradually refined, probably for further discussions. The requirements are then written using natural language with assistance of some formal or semi-formal language.

Requirement gathering is concerned with the recognition of the goals to be achieved by the envisioned system, the operationalization of such goals into services and constraints, and the task of of responsibilities for the resulting requirements to agents e.g. humans, devices, and software. The processes involved in requirements gathering include domain analysis, elicitation, specification, evaluation, negotiation, documentation, and evolution.

The success of requirement gathering in software engineering is dependent on information got from natural language. Therefore, Natural Language Processing (NLP) is highly recommended to use in this field. It plays a vital role in requirement gathering.