

# A New Structural View Of The Holy Book Based On Specific Words: Towards Unique Chapters (Surat) And Sentences (Ayat) Characterization In The Quran

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## Abstract

In the context of web Islamic data analysis and authentication an important task is to be able to authenticate the holy book if published in the net. For that purpose, in order to detect texts contained in the holy book, it seems obvious to first characterize words which are specific to existing chapters (i.e. "Sourat") and words characterizing each sentence in any chapter (i.e. "Aya"). In this current research, we have first mapped the text of the Quran to a binary context  $R$  linking each chapter to all words contained in it, and by calculating the fringe relation  $F$  of  $R$ , we have been able to discover in a very short time all specific words in each chapter of the holy book. By applying the same approach we have found all specific words of each sentence (i.e. "Aya") in the same chapter whenever it is possible. We have found that almost all sentences in the same chapter have one or many specific words. Only sentences repeated in the same chapter or those sentences included in each other might not have specific words. Observation of words simultaneously specific to a chapter in the holy book and to the sentence in the same chapter gave us the idea for characterizing all specific sentences in each chapter with respect to the whole Quran. We found that for 42 chapters all specific words of a chapter are also specific of some sentence in the same chapter. Such specific words might be used to detect in a shorter time website containing some part of the Quran and therefore should help for checking their authenticity. As a matter of fact by goggling only two or three specific words of a chapter, we observed that search results are directly related to the corresponding chapter in the Quran. All results have been obtained for Arabic texts with or without vowels. Utilization of adequate data structures and threads enabled us to have efficient software written in Java language. The present tool is directly useful for the recognition of different texts in any domain. In the context of our current project, we project to use the same methods to characterize Islamic books in general.

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