

## DEVELOPMENT OF ARTIFICIAL INTELLIGENCE BASE SYSTEM, FOR TEACHING CLASSICAL ARABIC & QUR'ANIC VOCABULARIES FOR URDU LANGUAGE USERS<sup>o</sup>

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### ABSTRACT

“Classical Arabic” or “Fusha Arabic” is very important because the Holy Qur'an was revealed in Classical Arabic. The Holy Qur'an describes itself as an “Arabic Qur'an” (Surah Yusuf:2). Secondly, it is the language of the Last and Final Prophet and Messenger of Allah Muhammad (s.a.w) and core Islamic literature is written in Classical Arabic. Arabic is one of the Semitic languages in which different variations of verbs, nouns can be obtained by prefixing or suffixing different characters in root word. Information technology (IT) has a vital role in modern era, learning process has undergone great changes and teaching institutes are using Virtual Learning Systems for teaching purpose. The existing systems for the Arabic language do not meet these modern changes. There is need to improve the state of the art by using advanced techniques to fill this gap. This paper focuses on development of teaching system of Arabic conjugations for non-Arabs; initially it is designed for the Urdu users, with extensions to other languages also planned. This system is developed using techniques from Natural Language Processing (NLP) and Artificial Intelligence (AI). This system till now covers the teaching of “علم الصرف” components. Towards this end, different algorithms have been designed that generate conjugations from the given root words and can additionally generate Urdu translations. The system also generates the runtime examinations as per learning syllabus of the student, and also recommends the weak areas of student where improvement is required.

**Keywords:** *Qur'an , Artificial Intelligence, Natural Language Processing.*

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<sup>o</sup> This article was submitted on: 15/02/2018 and accepted for publication on: 06/05/2018.

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## 6. CONCLUSION

In this paper, we have proposed system for teaching Classical Arabic conjugation for the users of Urdu language. Our system is based on algorithmic techniques borrowed from the field of Artificial Intelligence (AI) and Natural Language Processing (NLP). Our proposed system is both dynamic and intelligent. It is primarily designed and developed to offer teaching and of Qur'anic sciences and student assessments. Native language support is available, starting with Urdu. Differential learning is also possible using the same data sets. The research has shown early adoption by computer literate learners and teachers finding assistance for their distance learning programs. Moreover, the self-evaluation provides rapid learning and increased productivity.

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