Abstract

This paper proposes NLP based system to facilitate user interaction by verbal communication in a seamless manner. With the advancement of technology the human machine interaction becomes an unavoidable scenario. Introduction of natural communication is an addition that has to be made sooner or later in every department. Devices that accept interaction based on Natural Language, like, using voice commands, can understand basic human orders or answer questions whenever user expressions fit into the known language pattern. The purpose of this work is to introduce a system which is capable of interacting with human and is able to assist them using authentic knowledge and provide a smooth experience.

References

1. Seamless Human-Device Interaction in the Internet of Things. Eugenio Rubio-Drosdov, Daniel Díaz-Sánchez, Senior Member, IEEE, Florina Almenárez, Member, IEEE, Patricia Arias-Cabarcos, Member, IEEE, and Andrés Marín, Member, IEEE.
2. E. Rubio-Drosdov, D. Diaz-Sanchez, P. Arias-Cabarcos, F. Almenarez, and A. Marin, “Towards a seamless human interaction in IoT,” in Consumer Electronics (ISCE), 2015 IEEE International Symposium on, pp. 1-2, IEEE, Jun. 2015.

3. G. W. Furnas, T. K. Landauer, L. M. Gomez, and S. T. Dumais, “The vocabulary problem in human-system communication,” Communications of the ACM, vol. 30, no. 11, pp. 964-971, Nov. 1987.

4. T. K. Landauer, K. M. Galotti, and S. Hartwell, “Natural command names and initial learning: a study of text-editing terms,” Communications of the ACM, vol. 26, no. 7, pp. 495-503, Jul. 1983.

5. M. R. Huq, N. T. T. Tuyen, Y. K. Lee, B. S. Jeong, and S. Lee, “Modeling an Ontology for Managing Contexts in Smart Meeting Space,” in SWWS 2007: Proceedings of the 2007 International Conference on Semantic Web and Web Services, Las Vegas, Nevada, USA, Jun. 25-28, 2007, pp. 96-102.

6. P. Bailis, J. Yang, V. J. Reddi, and Y. Zhu, “Research for practice: seb security and mobile web computing,” in Communications of the ACM, vol. 60, no. 1, pp. 50-53, Jan. 2017.

7. C. Treude, and M. A. Storey, “How tagging helps bridge the gap between social and technical aspects in software development,” in Software Engineering (ICSE) 2009. IEEE 31st International Conference on, pp. 12-22, IEEE, May. 2009.

8. W. Jones, A. J. Phuwanartnurak, R. Gill, and H. Bruce, “Don`t take my folders away!: organizing personal information to get things done,” in CHI’05 Extended Abstracts on Human Factors in Computing Systems, ACM, Portland, OR, USA, Apr. 02-07, 2005, pp. 1505-1508.

9. C. D. Manning, M. Surdeanu, J. Bauer, J. Finkel, S. J. Bethard, and D. McClosky, “The Stanford CoreNLP Natural Language Processing Toolkit,” in Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics: System Demonstrations, Baltimore, Maryland, USA, Jun. 22-27, 2014, pp. 55-60.

10. E. Loper, and S. Bird, “NLTK: the natural language toolkit,” in Proc. ETMTNL’02, Philadelphia, Pennsylvania, USA, Jul. 2002, pp. 69-72.

Index Terms

Computer Science  Information Systems

Keywords

Human-Device Interaction, Natural Language Processing