Abstract

Since long, corporations are looking for knowledge sources which can provide structured description of data and can focus on meaning and shared understanding. Structures which can facilitate open world assumptions and can be flexible enough to incorporate and recognize more than one name for an entity. A source whose major purpose is to facilitate human communication and interoperability. Clearly, databases fail to provide these features and ontologies have emerged as an alternative choice, but corporations working on same domain tend to make different ontologies. The problem occurs when they want to share their data/knowledge. Thus we need tools to merge ontologies into one. This task is termed as ontology matching. This is an emerging area and still we have to go a long way in having an ideal matcher which can produce good results. In this paper we have shown a framework to
matching ontologies using graphs.

References

- Cruz, I. F., Stroe, C., Caci, M., Caimi, F., Palmonari, M., Antonelli, F. P., Keles, U. C. 2010. Using AgreementMaker to Align Ontologies for OAEI 2010. Fifth International Workshop on Ontology Matching, co-located with the International Semantic Web Conference, Shanghai, China.
- Ruiz, E. J., & Grau, B. C. 2011. LogMap: Logic-based and Scalable Ontology Matching. In the 10th International Semantic Web Conference.
- Jérôme, D. 2011. AROMA results for OAEI 2011. In Proceedings of the Sixth International Workshop on Ontology Matching.
- Agrawal, R., Imieliński, T., Swami, A. 1993. Mining association rules between sets of items in large databases. Vol 22 (2), ACM.
- Jorge, G., Bernad, J., Mena, E. 2011. Ontology matching with CIDER: evaluation report for OAEI 2011. In Proceedings of the Sixth International Workshop on Ontology Matching.
- Peng, W., Xu, B. 2008. Lily: Ontology alignment results for OAEI 2008. In Proceedings of the Third International Workshop on Ontology Matching.
- Juanzi, L., Tang, J., Li, Y., & Luo, Q. 2009. Rimom: A dynamic multistrategy ontology alignment framework. Knowledge and Data Engineering, IEEE Transactions on, Vol. 21(8), pp 1218-1232.
- Fayçal, H., Safar, B., Niraula, N. B., Reynaud, C. 2010. TaxoMap alignment and refinement modules: Results for OAEI 2010. In Proceedings of the Fifth International Workshop on Ontology Matching.
- DuyHoa, N., Bellahsene, Z. 2012. YAM++: a multi-strategy based approach for ontology matching task. Knowledge Engineering and Knowledge Management. Springer Berlin Heidelberg, pp 421-425.
- Shvaiko, P., Euzenat, J., Srinivas, K., Mao, M., Ruiz, E. J. (Eds) 2013. Proceedings of the 8th International Workshop on Ontology Matching.
- Vashisth, A., Mathur, I., Joshi, N. 2012. OntoAna: Domain Ontology for Human Anatomy. arXiv preprint arXiv:1208.3802.
- Mathur, I., Mathur, S., Joshi, N. 2011. Ontology development for health care in India. Proceedings of the International Conference & Workshop on Emerging Trends in Technology. ACM.
- Mathur, I., Darbari, H., Joshi, N. 2013. Domain Ontology Development for Communicable Diseases. Proceedings of International Conference on Artificial Intelligence, Soft Computing.
- Levenshtein, V. I. 1966. Binary codes capable of correcting deletions, insertions and reversals. Soviet Physics Doklady. Vol. 10.
- Ukkonen, E. 1992. Approximate string-matching with q-grams and maximal matches. Theoretical computer science, Vol. 92(1), pp 191-211.
- Smith, T. F., Waterman, M. S. 1981. Identification of common molecular subsequences. Journal of molecular biology, Vol. 147(1), pp 195-197.
Index Terms

Computer Science
Information Sciences

Keywords

Ontology Matching  Ontology Alignment  Graph Matching  Kuhn-Munkres Algorithm.