

Heterogenetic knowledge classification Using Fuzzy inference for unified data clusters

Umer Farooq^{1,2,*}, Khalil Ahmad^{1,3}

¹National College of Business Administration & Economics, Lahore, Pakistan

²Department of Computer Science, Lahore Garrison University, Lahore, Pakistan

³Delta3T, Lahore, Pakistan

Abstract

Emerging technologies such as Cloud Computing, Internet of Things (IoT) and Big Data are developing a digital ecosystem. This ecosystem is catering diverse types and volumes of data that represents information segments. The essence of these segments become vital when transformed into knowledge units to provide a more meaningful and productive perspective. The transformed knowledge at this stage is heterogenetic in nature, consisting of functional and structural properties which needs to be arranged to formulate robust and efficient knowledge repositories. The heterogenetic knowledge can be transformed into classification clusters using structural properties by controlling the degree of heterogeneity. In this paper, Fuzzy Inference System (FIS) based classification approach is proposed for heterogenetic knowledge clustering.

Keywords: GPS, IoT, FIS, Knowledge Heterogeneity, Knowledge System

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*Corresponding author. Email: umerfarooq@lgu.edu.pk

1. Introduction

Emerging technologies doubling the data volume in every two years expected 800 TB by 2020. Data becomes more valuable than the money, fundamental property of an organization irrespective of the size of the organization. Social media, e-commerce, internet of things, sensors etc., are the major sources of the data generation (Gantz, Reinsel, & Arend, 2012). It is important to evaluate what data have been generated and how to use it. Thousands of devices equipped with IoT, “network of physical object or thing, embedded with software/hardware, sensors, and network connectivity which enable collection and exchange of data among the devices”. The IoT enabled transportation system automate the process of collection of data from the diverse location and aggregated very quickly. For example, Google collect real time traffic data from GPS and Google Maps

app enabled mobile phones make possible Google to evaluate live traffic condition and use it for the navigation.

The creation, distribution, manipulation and integration of information influencing human development, central activity as economic, political and cultural in information societies. The digital information explosion changing all aspect of our society.

The progressive development of information technology changed the traditional transformation of information advancing the contents and methods of information science. The enriched digital resources enhanced the boundaries of research to webpages, books, patents and standard literatures. These perspectives, knowledge management and services are goals of information science today. The standardization is an important source of knowledge carrier. Ontology and semantic technologies are useful for the standardization of information to knowledge. Semantic computing used to build concept network automatically in

