Abstract

The arrangement of things in n-dimensional space is specified as Spatial. Spatial data consists of values that denote the location and shape of objects and areas on the earth's surface. Spatial information includes facts such as location of features, the relationship of geographic features and measurements of geographic features. The spatial cognition is a primal area of study in various other fields such as Robotics, Psychology, Geosciences, Geography, Political Sciences, Geographic Economy, Environmental, Mining and Petroleum Engineering, Natural Resources, Epidemiology, Demography etc. Any text document which contains physical location specifications such as place names, geographic coordinates, landmarks, country names etc., are supposed to contain the spatial information. The spatial information may also
be represented using vague or fuzzy descriptions involving linguistic terms such as near to, far from, to the east of, very close. Given a query involving events, the aim of this ongoing research work is to extract the relevant information from multiple text documents, resolve the uncertainty and vagueness and translate them in to locations in a map. The input to the system would be a text Corpus and a Spatial Query event. The output of the system is a map showing the most possible, disambiguated location of the event queried. The author proposes Fuzzy Logic Techniques for resolving the uncertainty in the spatial expressions.

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A Fuzzy Logic based Method for Efficient Retrieval of Vague and Uncertain Spatial Expressions in Text Exploiting the Granulation of the Spatial Event Queries


Index Terms

Computer Science
Artificial Intelligence
Keywords
Fuzzy Logic  Granulation  Possibility Distribution Function  Spatial Event Queries