

## **i Title:**

Jafar M. Al-Kofahi, Ahmed Tamrawi, Tung Thanh Nguyen, Hoan Anh Nguyen, and Tien N. Nguyen, Fuzzy Set Approach for Automatic Tagging in Evolving Software Published in 2010 .....

## **ii Keywords**

**ii1 Tag :** It is a keyword that is associated to a document or work item that helps define it.

**ii2 Fuzzy set :** These are sets whose members have degree/grades of membership in a set between the interval of  $[0,1]$  as opposed to crisp sets where a member either belongs completely to a set or not.

**ii3 TagRec :** It is the tag recommendation tool developed by the authors of the paper that takes into account users feedbacks on tags for the automation .

**ii4 A work item** in Jazz is a generalized idea of a development task, that mainly consists of a summary, a description, a tag, and relevant software artifacts.

## **iii Brief Summaries**

### **iii1 Motivation:**

**Software** tagging has been seen to be an important computing mechanism for the improvement of both the technical and social aspects of software development. Developers could tag their artifacts manually , which causes some similar artifacts to have the same tags and certain artifacts having no tags. Similar artifacts should have some distinguishing tag to identify them. Thus the need for an auto tagging tool that is accurate so that it handles the contents of these work items , so as to improve the state of software tagging.

### **iii2 Data**

Data from the real-world IBM Jazz repository that contained data of more than 3 years was taken and used to conduct experiments and base the results of the evaluation of the tool created.

### **iii3 Related Work**

There has been related work in the field of software tagging , with the development of tools like GNU Global , Social bookmarking in code snippets , ByteMycode but these tools focus on source code tagging. In a similar research Gay proposed the use of

relevant feedbacks to improve concept location with various information retrieval (IR) technique

#### **iii4 Study Instruments :**

**Interview of 175 developers** using the Jazz repository gave the authors answers to several questions including the categorization of broad contents , organizations of artifacts in the system .

Also, they used the WVTool for extracting the terms and assigning significance values for the terms in correspondence to the work items.

Based on these interview and experiments it was decided to develop the auto tagging tool.

#### **iv Scope Of Improvement**

**iv1:** Could use more than one platform to see and test the tool on apart from IBM Jazz.

**iv2:** The real authors of the work items could be used to validate the work since the judgements could vary .

**iv3:** To use program analysis to enrich the semantic relations between source-code work items