

## **Project proposal**

### *Pattern detection of Chikungunya and dengue patients in Bangladesh*

#### **Introduction**

Chikungunya or Chikungunya virus transmitted by Aedes Mosquitoes is an arboviral disease . The virus was first isolated in 1952 in Tanzania. According to the World Health Organization (WHO) reports, the epidemiology of the disease has been identified in nearly 40 countries around the world. These countries are located in Asia, Africa, Europe, and America .The first identified Chikungunya outbreak occurred in Bangladesh in 2008. In December 2008, an investigation team from the Institute of Epidemiology, Disease Control and Research (IEDCR) and International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) investigated the first outbreak of chikungunya fever in the Rajshahi and Chapianawabganj districts of Bangladesh, which was in fact the third outbreak in the whole of Bangladesh. In late October 2011.In most of the place epidemic has reached the peak ,before they are considered as a viral diseases. There should be a system which will predict Dengue or chikungunya.

#### **Project objectives**

The objective of the system will be, to categorize whether the illness is Dengue or Chikungunya, as the initial symptoms are similar in both the disease. The system will analyze the datasets and will give information about the disease. The technique of the system is that it will analyze all the medical data and will use machine learning technique to identify the patterns and relationships among large data ,so that it can predict the outcome of the diseases.

#### **Outcome and Impact**

If we collect large volume of datasets, information about previous chikungunya & dengue patients, clinical information etc we can predict whether the patient is affected by dengue or chikungunya. Based on prediction, we can tell the difference of chikungunya patients and dengue patients. So, doctors can start treatment quickly and legitimately.

#### **Motivation**

In this project, we use real data for work which is, collected from several hospitals, doctors, health workers etc. Our work help many doctors to detect chikungunya or dengue. After that, it is easy for doctors and health workers to treat the patients properly.

## **Tools**

To predict result, here we use weka tool. Weka is a collection of machine learning algorithms for data mining tasks. The algorithms can either be applied directly to a dataset or called from your own Java code. Weka contains tools for data pre-processing, classification, regression, clustering, association rules, and visualization. It is also well-suited for developing new machine learning schemes. In weka, we run collected datasets and based on those datasets, it give us result. Also, we use KDD(The Knowledge Discovery Process) for discovery leaning. KDD is the process of extracting high-level knowledge from low-level data. Therefore, KDD refers to the nontrivial extraction of implicit, previously unknown and potentially useful information from data in databases. While data mining and KDD are often treated as the same words but in real data mining, it is an important step in the KDD process. The KDD process is often viewed as a multidisciplinary activity that encompasses techniques such as machine learning.

## **Future scope**

If we complete this project properly, after that it is possible to predict the environment factors of chikungunya and dengue. Also we'll predict risky area for chikungunya and dengue.

## **Conclusion**

Now a days, chikungunya and dengue are one of the threatening disease of all over the world. In recent years there have been explosive outbreak of chikungunya and dengue fever. Integrated vector management through the elimination breeding sites, use of anti-adult measures and personal protection will contribute to prevent an outbreak.

## **Reference**

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