**LITERATURE SURVEY**

# A Bandwidth Friendly Architecture for Cloud Gaming”.

**AUTHORS: Muhammad Usman**

# Cloud Gaming is emerging as a viable alternative to traditional stand-alone and online computer games. The current trend is to design efficient remote-rendering models for cloud gaming that allow video packets of game scenes to be sent across, from servers to clients, for an optimal game experience. This approach, however, still raises concerns in terms of network bandwidth and costs associated, becoming bottlenecks for game developers and users, particularly under scarce bandwidth availability. In this paper, we propose an architecture for computer gaming that leverages cloud advantages for gaming in the absence of necessary bandwidth to support remote rendering. Implementation of the proposed model through Amazon Web Services (AWS) using a prototype game and evaluation through several studies has revealed that only 1KBps data per player is transferred between cloud and players. Through these results, the paper presents arguments for more careful planning and need for further documentation in order to design games, choosing the correct resources as part of the architecture.

# “Efficient Prediction of Network Traffic for Real-Time Applications”

# AUTHORS: Muhammad Faisal Iqbal

Accurate real-time traffic prediction is required in many networking applications like dynamic resource allocation and power management. This paper explores a number of predictors and searches for a predictor which has high accuracy and low computation complexity and power consumption. Many predictors from three different classes, including classic time series, artificial neural networks, and wavelet transform-based predictors, are compared. These predictors are evaluated using real network traces. Comparison of accuracy and cost, both in terms of computation complexity and power consumption, is presented. It is observed that a double exponential smoothing predictor provides a reasonable tradeoff between performance and cost overhead.

# 3 “Machine Learning Based Internet Traffic Recognition with Statistical Approach”

# AUTHORS : Jaiswal Rupesh Chandrakant

# The researchers have started looking for Internet traffic recognition techniques that are independent of ‘well known’ TCP or UDP port numbers, or interpreting the contents of packet payloads. Newer approaches classify traffic by recognizing statistical patterns in externally observable attributes of the traffic (such as typical packet lengths and inter-arrival times). The main goal is to cluster or classify the Internet traffic flows into groups that have identical statistical properties. The need to deal with Traffic patterns, large datasets and Multidimensional spaces of flow and packet attributes is one of the reasons for the introduction of Machine Learning (ML) techniques in this field. ML techniques are subset of Artificial Intelligence used for traffic recognition. Further, there are four types of Machine Learning, i.e. Classification (Supervised learning), clustering (Un-Supervised learning), Numeric prediction and Association. In this research paper IP traffic recognition through classification process is implemented. Different researchers are calling this process as IP traffic Recognition, IP traffic Identification, and sometimes IP traffic classification. Here Real time internet traffic has been captured using packet capturing tool and datasets has been developed. Also few standard datasets have been used in this research work. Then using standard attribute selection algorithms, a reduced statistical feature dataset has been developed. After that, Six ML algorithms AdaboostM1, C4.5, Random Forest tree, MLP, RBF and SVM with Polykernel function classifiers are used for IP traffic classification. This implementation and analysis shows that Tree based algorithms are effective ML techniques for Internet traffic classification with accuracy up to of 99.7616 %

# .4 “The Indian Telecom Services Performance Indicators”

# AUTHORS: Mahanagar Doorsanchar Bhawan

# This report presents the growth trends for the telecom services in India for the quarter ending March 2008. This report provides a broad perspective on the Telecom Services to serve as a reference document for various stakeholders, research agencies and analysts.

# 5) An Improved Random Forest Algorithm Based on Attribute Compatibility”

# AUTHORS: Yu Liu, Lu Liu, Yin Gao, Liu Yang

ID3 algorithm and C4.5 algorithm of decision tree are commonly used in the base classifier in random forest. In order to solve the problem that the basic classifier algorithm is biased to select multi-valued attributes and contains a lot of logarithmic operations, the attribute compatibility of rough set is introduced in this paper. Rough set is a mathematical tool for dealing with uncertain information. In this paper, the expression of information gain or information gain rate in the base classifier is reconstructed with compatibility, and the attribute with the highest compatibility is selected as the segmentation attribute to segment the data set. Finally, three UCI data sets are used to verify the accuracy of the algorithm. The experimental results show that the proposed algorithm has a higher accuracy than the traditional random forest algorithm.