International Journal of Advance Research in Science and Engineering
Vol. No.6, Issue No. 03 , March 2017
www.ijarse.com
IJARSE
ISSN (O) 2319 - 8354
ISSN (P) 2319 - 8346

APPLICATIONS OF STATISTICS

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ABSTRACT

Statistics is commonly used to mean numerical facts and figures. The purpose of statistics is to manipulate, summarize and investigate data so that we can get a useful result. In this paper, we conclude various applications of statistics in many fields. Statistics has many applications in areas which include agriculture, social field, science & research, politics, economics, industry, banking, education, insurance companies, administration and business.

In this paper we present an overview of importance & application of statistics in above fields

I. INTRODUCTION

Statistics is the science of collecting, analyzing, and making inference from data. Statistics refers the body of principles and procedures developed for the collection, classification, summarization, interpretation and analysis of data, so that useful decision making information results. In ancient period statistics was used by states mainly for two purposes i.e regarding population size for recruitment in army and land holding to collect total amount of land revenue .In India, a system of collecting official and administrative statistics had come in existence during the reign of Chandra Gupta Maurya (324-300 B.C). Statistical methods and analysis are often used to communicate research findings and to support hypothesis and give credibility to research methodology and conclusions. Statistics is applied in marketing to identify market trends and to measure and evaluate the potential and success of marketing programmes.

Statistic in Business: Business analytics provide solutions using data statistical and quantitative analysis. Facts based data used to measure past performance to organization. Business goals are determined, an analysis methodology is selected and data is acquired to support the analysis. The analysis is typically performed against a smaller sample of data. Analytic tools range from spread sheets with statistical functions to complex data mining and predictive modeling applications. As patterns and relationships in the data are identified new questions are asked and analytic process iterates until the business goal is met.

Statistics in insurance Companies: Statistical methods are used to assess risk in the insurance and finance industries Statistical knowledge is used to make long term financial forecast & these forecasts are used by financial and government organizations to solve current financial problems and to make future plans.

Statistics in Economics: Statistical theories in economics are used in testing hypothesis and forecasting future trends. It takes economic modes tests them through statistical trails and then compare and contrast the results against real-life examples such information is used by government to set economic policy and by private business to aid decisions on prices inventory and production.

Statistics in Medical Science: Statistical theories are also used in medical science as (1) biostatistics (2) epidemiology (3) chemometrics etc

IJARSE
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For e.g. Correlation test is used in biostatistics (such as the pearson spearman test to identify the effect of new drug on animals/ humans). ANOVA, t-test & chi square test etc. are used in physico therapy.

Statistics in Computer Science: Statistics in computer science is used for a number of things including data mining, data compression and speech recognition softwares used in apple's siri and Google uses data to perform online translation . Data mining is performed with the help of statistics by using functions to find irregulatarities or inconsistencies within data. Data compression uses statistical algorithms to compress data .Statistics is also used in network traffic modeling.

Statistics in Banking: For every banking industry statistics relating to demand deposits, time deposits, credit etc. are of great significance on the basis of data, banking industries determines their credit policy .

Statistics in Research: Statistics has also a great significance in research field. Objectives are identified & On the basis of data inferences are drawn that, how and why the variables are related among themselves.

Statistics in Education: Statistics progress in the field of education is measured in terms of literacy rate of population , no. of schools , colleges and universities in the country and no. of students studying there. data concerning male and female education ,adult education etc. is necessary to formulate any suitable education policy. Statistics regarding the no. of students in each class, no. of books issued by library etc. are of great importance for introducing education reforms.

Statistics in Political Field: Politician plays an important role in designing the economic, social, Industrial, agriculture and Educational policies of the country. It is very essential that politician be fully aware of the statistical data pertaining to per capita Income, unemployment, import and export etc. Policies of the party in power can give wide publicity to the achievements of their government on the basis of statistical data.

Statistics in Administration: Every administrator has to depend on statistics for the sake of efficient administration. Statistics are the eyes of government administration. Statistics prove helpful in taking decisions with regard to the defence of the country, internal law and order and crime situation, police and armed forces etc. Reports of the different commissions appointed by the government are substantiated by the statistical data.

II. CONCLUSION

At last we conclude that there is no field in the world where statistics is not used. Thus we see that statistics has great significance in every field on the earth.

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IJARSE
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