



EDITORIAL

The primary aims of publishing the research journal – ‘Journal of Applied and Fundamental Sciences’- are:

- i) to create a healthy and dynamic research activities in the Basic sciences, viz. Biosciences, Botany, Chemistry, Mathematics, Physics, and Zoology for the benefits of the research workers, particularly in the NE region of India comprising of eight states,
- ii) to publish original research papers with a view to sharing innovative ideas, techniques, the frontiers of knowledge, and scientific findings to other research teams for helping in their work,
- iii) to focus on professional benefits of the researchers by their publications,
- iv) to generate an opportunity of serving the world people with a better knowledge of the Universe, Life and Technological developments.

One of the main objectives of NEP-2020 is to focus on multidisciplinary, interdisciplinary and cross-disciplinary higher education and research. As such, modern Statistics including Data science and Artificial intelligence play an unprecedented role in the field of science and technology. In general, Statistics is used to describe the variability inherent in data in a quantitative fashion, and to quantify relationships between variables. Statistical analysis is used in designing scientific studies to increase consistency, measure uncertainty, and produce robust datasets.

Modern science is often based on statements of statistical significance and probability. For example: Studies have shown that the probability of developing lung cancer is almost 20 times greater in cigarette smokers compared to non-smokers. In general, scientific data rarely lead to absolute conclusions. Not all smokers die from lung cancer – some smokers decide to quit, thus reducing their risk, some smokers may die prematurely from cardiovascular or diseases other than lung cancer, and some smokers may simply never contract the disease. All data exhibit variability, and it is the role of statistics to quantify this variability and allow scientists to make more accurate statements about their data. Statistical techniques allow scientists to put numbers to this probability, moving from a statement like "If you smoke cigarettes, you are more likely to develop lung cancer" to the one that started this module: "The probability of developing lung cancer is almost 20 times greater in cigarette smokers compared to non-smokers." The quantification of probability offered by statistics is a powerful tool used widely throughout science.

Unlike mathematics, statistics had its origins in public administration. Applications arose early in demography and economics; large areas of micro- and macro-economics today are "statistics" with an emphasis on time-series analyses. With its emphasis on learning from data and making best predictions, statistics also has been shaped by areas of academic research including psychological testing, medicine and epidemiology. The ideas of statistical testing have considerable overlap with decision science. With its concerns with searching and effectively presenting data, statistics has overlap with information science and computer science. At present, almost all the scientific and socio-scientific research areas have some connections to data science and artificial intelligence; and in this regard, Statistics and Probability theory have significantly evolved cutting-edge research trends in the fields of all the basic sciences, computational biology, economics, etc.

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