Gene

A gene is the basic physical and functional unit of heredity. Genes, which are made up of DNA, act as instructions to make molecules, such as proteins. In humans, genes vary in size from a few hundred DNA bases to more than 2 million bases.

Gene expression

Gene expression is the process by which information from a gene is used in the synthesis of a functional gene product, such as proteins.

Some of the tools for gene expression analysis are

1. AltAnalyze
2. Dchip
3. geWorkbench 2.5.1 from NCI.
4. Babelomics suit
5. Myrna

- Cloud-CoXCS, is a machine learning classification system for gene expression datasets on the Cloud infrastructure.
- It is composed of three components: CoXCS, Aneka, and Cloud computing infrastructure.

- Gene expression technology, allows for the monitoring of the expression levels of thousands of genes at once.
- As a direct result of recent advances technology, it is now feasible to obtain gene expression profiles of tissue samples at relatively low costs.

- The gene expression software’s, such as as Myrna, uses cloud computing, an Internet-based method of sharing computer resources.
- Cloud computing bundles together the processing power of the individual computers using the Internet.
- A number of firms with large computing centers like Amazon, Microsoft etc, rent unused computers over the Internet for a fee.
- Cloud computing makes economic sense because cloud vendors are very efficient at running and maintaining huge collections of computers.
- Researchers struggling to keep pace with their sequencing instruments can use the cloud to scale up their analyses while avoiding the headaches associated with building and running their own computer center.