Use of Visualization in Bioinformatics - Challenges and Opportunities

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Abstract:
Bioinformatics is the application of computer science and information technology to the field of biology and medicine. Many applications of bioinformatics aim to extract information and gain insight from data. In experimental projects, a biological question is addressed by designing an experiment generating data that allows testing a hypothesis or extracting patterns relating to underlying biology. Data generated within one project should be interpreted in context of knowledge accumulated in the field and represented in biological databases or in the scientific literature. In order to help understanding it is highly useful to represent data and patterns using visualization techniques and statistics are essential to test whether identified patterns are likely to occur by chance. In this talk I will discuss how visualization including information visualization can be utilized to aid in understanding bioinformatics data and methods.