

The Future of Bioinformatics

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Is bioinformatics a discipline? Perhaps a more fundamental question is what is a discipline? According to the Webster's New World Dictionary it is "a system of rules, as for a monastic order." A little harsh perhaps. A more apropos definition is a field of study that stands alone, yet at the same time can be integrated into a large picture of human understanding. In this sense is bioinformatics a discipline? Certainly a question worthy of debate. Most of this audience would say yes, others would say it is a part of computer or information science, others a methodology within the biological sciences and others something destined to merge with medical informatics. If we are struggling for a unique definition perhaps this indicates we want it to be something that stands alone and distinct? I will address this question.

Regardless of how we classify bioinformatics, we are dealing with a fledgling enterprise that arose out of the human genome project and has become an interpreter of the genomic language of DNA and is attempting to decipher the more complex languages where proteins are the nouns and interactions the syntax and pathways the sentences and living systems the complete volume. All fledglings learn how to discover, how to grow and adapt and how to live in a complex world. Bioinformatics is no exception. We will explore where we are on this learning curve with examples from our work and others. An exploration covering, methods development, putting the "bio" back in bioinformatics, quality control, and making the leap to systems biology.

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This paper appeared at the *2nd Asia-Pacific Bioinformatics Conference (APBC2004)*, Dunedin, New Zealand. Conferences in Research and Practice in Information Technology, Vol. 29. Yi-Ping Phoebe Chen. Ed. Reproduction for academic, not-for profit purposes permitted provided this text is included.



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